

KG

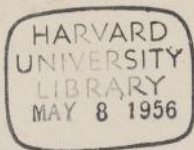
11365

576

KG.11365.576



KG 11365,576



11

11

11

5

16

Oct. 16, 1905.

Fourth Type Star $+14^{\circ} 12' 23'' (6.5)$
Comp. Star $= +15^{\circ} 11' 9'' (7.2)$

136	12	+14.8
24	52	
5	20	
6	40	

Index R & A

11 21 37

245.0		
312.8	\leftarrow 4th. type star dis.	
60.2	67.8	
142.3	42.1	
	<u>149.9</u>	-0.52

A

239.2		
319.5	40.3	-0.60
68.0	67.0	
135.0	<u>147.3</u>	-0.63

Index L & B

159.2	62.5	
222.7		
334.6	70.4	
45.0	<u>133.9</u>	-0.90

B

153.2		
228.1	7.5	74.3
340.0		62.0
42.0		<u>136.3</u>
		-0.45
		mean -0.74

11	28	28
	49	65
11	24	62
5		-42
16	24	20

color 5

Oct. 16, 1905.

S. J. 1^h 26^m
 H. A. -4 54
 Dec +14.4
 P. A. 29.6^h A
 Sprockets - 5.5 B
 " - 4.5 b

Occultation of γ Tauri.

B 236

18	50	3.8
18	51	3.8
18	52	4.0

B 394

11	45	0.0
11	46	0.0
11	47	0.0

Oct. 16, 1905.

Inversion. by B. 236.

$19^h \quad 7^m \quad 44.5^s$
 $45.0 = \text{Time of Inversion.}$
 $\therefore \text{East. Time Inversion} = 12^h \quad 2^m \quad 38.5^s$
 The above immersion considered quite good, although on the bright limb of moon.

B 236

19	14	7.7
19	15	7.8

B 394

12	9	0.0
12	10	0.0

~~Oscillations of γ Tauri~~

~~Immersion.~~

B 236

19	42	13.5
19	43	13.7

B 394

12	37	0.0
12	38	0.0

Oct. 16, 1905.

$\begin{matrix} 19 & 56 & 1.5 \\ = 12^h & 50^m & 45.5 \end{matrix}$
 Emission = Eastern Time.

B 236
 20 1 17.0
 20 2 17.1

B 394
 12 56 0.0
 12 57 0.0

The above Emission not considered of any value as, it being a little before theoretical time of Em. and Observer's eye being tired, he took it away from the telescope for a moment and the telescope drifted. On looking near the moon's limb it was found that the star was visible. (Probably ^{occurred} ~~some~~ ^{time} ~~some~~ ^{above} several seconds late)

W's watch used for times tonight
 Watch 42 sec fast

Oct. 17, 1905. (Tuesday)

Novae Aquilae No. 2 Phot. J. H. Ok. Bowie Res.

$$\begin{array}{r} 18 \quad 58 \\ 21 \quad 10 \\ \hline 2 \quad 12 \end{array}$$

-5.1

Index Red

80.6 ← comp. star dis.

$$\begin{array}{r} 120.8 \\ 265.0 \\ 296.0 \end{array} \quad \begin{array}{r} 40.2' \\ 31.0' \\ \hline 71.2' \end{array} \quad +2.47'$$

A

$$\begin{array}{r} 85.3 \\ 115.4 \\ 260.9 \\ 299.5 \end{array} \quad \begin{array}{r} 30.1' \\ 38.6' \\ \hline 68.7' \end{array} \quad +2.51'$$

Index LUB

$$\begin{array}{r} 350.6 \\ 31.7 \\ 175.0 \\ 202.7 \end{array} \quad \begin{array}{r} 41.1' \\ 27.7' \\ \hline 68.8' \end{array} \quad +2.55'$$

B

$$356.5 \quad +2.56'$$

$$\begin{array}{r} 26.0 \\ 171.0 \\ 209.4 \end{array} \quad \begin{array}{r} 29.5' \\ 38.4' \\ \hline 67.9' \end{array} \quad +2.58'$$

Mean +2.54'

$$\begin{array}{r} 7 \quad 46 \quad 14 \\ \hline 7 \quad 78 \quad 14 \\ 7 \quad 39 \quad 7 \\ 5 \quad -49 \\ \hline 12 \quad 38 \quad 18 \end{array}$$

Oct. 17, 1905.

S. J. 21^h 53^m

H. A. +2 55

Dec. -4.5

P. A. 42.5 Ver. B

Sprocket - 2.5 B

" - 1.5 b

+11° 305 (Fourth Type Star) Photo. J. H. Ok. Brown Rec

26 29 +11.8

22 37

3 52
8 8

Comp. Star = +11° 309 (8.0)

For measurements see fol. page

Oct. 17, 1905.

Index L & A

$$\begin{array}{r}
 8 \quad 59 \quad 30 \\
 336.5 \text{ compr. star dis} \\
 46.0 \\
 161.2 \\
 \hline
 218.3
 \end{array}
 \quad
 \begin{array}{r}
 69.5' \\
 57.1' \\
 \hline
 126.6' + 1.05'
 \end{array}
 \quad
 \text{B}$$

$$\begin{array}{r}
 343.6 \\
 37.6 \\
 153.4 \\
 227.9 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 54.2' \\
 74.5' \\
 \hline
 128.7' + 1.00'
 \end{array}
 \quad
 +1.02'$$

Index R & B

$$\begin{array}{r}
 243.0 \\
 319.0 \\
 70.7 \\
 128.0 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 76.0' \\
 57.3' \\
 \hline
 133.3' + 0.91'
 \end{array}
 \quad
 \text{A}$$

$$\begin{array}{r}
 249.2 \\
 311.0 \quad 310.7 \\
 61.0 \\
 139.8 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 61.8' \\
 78.8' \\
 \hline
 140.6' + 0.76'
 \end{array}
 \quad
 +0.84'$$

$$\begin{array}{r}
 9 \quad 8 \quad 35 \\
 \hline
 17 \quad 67 \quad 65 \\
 8 \quad 63 \quad 62 \\
 5 \quad -49 \\
 \hline
 14 \quad 3 \quad 13
 \end{array}$$

S.T. 23^h 15^m

H.A. - 2 56

Dec. + 11.2

P.A. 254.0 var B

Sprocket -4.5 A

-3.5 B

-3.0 b

Means +0.93'

Oct. 17, 1905.

Fourth Type Star $+31^{\circ} 1388$ Phot J

$$\begin{array}{r} 630 \quad 34 \quad +31.5 \\ 23 \quad 30 \\ \hline 7 \quad 4 \end{array}$$

Abandoned for present

V Vulpeculae Phot. J H. Ok. Bowie Res

$$\begin{array}{r} 20 \quad 31 \quad +26.0 \\ 23 \quad 34 \\ \hline 3 \quad 3 \end{array}$$

For measurements see fol. page

Oct. 17, 1905

Index R & A

66.3 ← var. dia

9	52	55	137.1	70.8	
			232.8	93.0	
			325.8	163.8	-0.31

A

	56.2				-0.31
	147.1		90.9		
	243.4		72.6		
	316.0		163.5		-0.31

Index L & B

	335.0				
	44.7		69.7		
	147.5		85.5		
	233.0		155.2		-0.47

B

	328.1				-0.48
--	-------	--	--	--	-------

10	6	42
19	58	97
9	59	48
5		-49

	52.8		84.7		
	155.0		69.3		
	224.3		154.0		-0.50

Mean - 0.40

14	58	59	S. J.	0 ^h	14 ^m
----	----	----	-------	----------------	-----------------

			H. A.	+3	40
--	--	--	-------	----	----

			Dec.	+26.4	
--	--	--	------	-------	--

			P. A.	139.5	Var B
--	--	--	-------	-------	-------

			Sprockets	-5.5	A
--	--	--	-----------	------	---

				-4.5	B
--	--	--	--	------	---

				-4.0	B
--	--	--	--	------	---

Oct. 17, 1905.

Fourth Type Star $+31^\circ$ 1388 (8.1) Phot. J & Ok Bowie~~30~~ 34 $+31.5$ Comp. Star = $+31^\circ$ 1392 (7.4)~~0~~ 256 9
5 51

Index L & A

339.1 ← comp. star dis.

44.5

654.

149.7

81.6

231.3

147.0' + 0.63'

B

332.1

+ 0.62'

52.0

79.9'

155.9

69.0'

224.9

148.9' + 0.60'

Index R & B

249.7

312.5

56.9

141.7

62.8'

84.8'

147.6' + 0.62'

A

240.0

+ 0.63'

321.4

81.4'

68.0

65.2'

133.2

146.6' + 0.64'

Mean + 0.62'

10 58 52

10 5 92

10 54 46

5 -49 J. J. 1 hr 3 min

15 53 57 H. A. -5 33

Dec. $+31.0$

P. d. 290.5 B

Sprocket - 2.5 B

" - 1.5 B

W's watch used for times tonight

Watch 49 sec. fast

Oct. 21, 1905 (Saturday)

Name Coraskis Algol Var. = 79. 1905. Cephei.

Coraskis New Var. Photo H. Obs Bowie Rec.

$$\begin{array}{r}
 28 \\
 4 \\
 21 \\
 \hline
 75
 \end{array}
 \begin{array}{r}
 34 \\
 34 \\
 \hline
 0
 \end{array}
 + 81.0$$

$$\text{Comp. Star} = +79^{\circ} 15' 7'' (9.3)$$

Index L & A

81.5 = comp star dis.

8 7 35

$$\begin{array}{r}
 118.5 \\
 257.3 \\
 305.1 \\
 \hline
 47.8 \\
 84.8
 \end{array}
 + 2.06^{\vee}$$

B

8 11 46

$$\begin{array}{r}
 76.6 \\
 123.7 \\
 263.1 \\
 298.5 \\
 \hline
 47.1 \\
 35.4 \\
 82.5
 \end{array}
 + 2.09^{\vee}$$

Index R & B

8 17 28

$$\begin{array}{r}
 352.4 \\
 28.7 \\
 168.3 \\
 213.0 \\
 \hline
 36.3 \\
 44.7 \\
 81.0
 \end{array}
 + 2.17^{\vee}$$

A

8 21 49

$$\begin{array}{r}
 347.0 \\
 33.35 \\
 174.5 \\
 208.5 \\
 \hline
 46.5 \\
 34.0 \\
 80.5
 \end{array}
 + 2.18^{\vee}$$

Mean + 2.14^v

$$\begin{array}{r}
 56 \\
 8 \\
 5 \\
 \hline
 13
 \end{array}
 \begin{array}{r}
 158 \\
 14 \\
 -1 \\
 \hline
 13
 \end{array}
 \begin{array}{r}
 40 \\
 7 \\
 \hline
 33
 \end{array}$$

12

Oct. 21 1905

Index Q & B

8 27 15 352.9 3 K.6' II

27.5

168.0

211.5

43.5'

74.1'

+2.25" v

A

8 30 48 348.4 4 K.4' +2.23" v

32.8

173.1

208.2

35.1'

79.5'

+2.21" v

Index L & A

8 37 2 263.5 33.7'

297.2

77.1

122.2

45.1'

78.1'

+2.23" v

B

8 41 53 258.6 +2.24" v

304.3

84.2

117.85

45.1'

33.3'

78.4'

+2.24" v

mean +2.24" v

8 135 118
 8 33 74
 +5 -6.7
 13 33 7

Oct. 21, 1905.

Index L&A

8 48 35

263.5

297.09 344

76.8 46.2

123.0 806 +2.1A^v

III

B

257.0

8 54 0

304.0 5.2 48.2

82.8 35.7118.5 83.9 +2.0A^v+2.13^v

Index R&B

8 59 33

173.6

209.6 36.0

347.6 45.933.5 81.9 +2.14^v

A

167.7 446

212.3

352.1

27.9

35.2
10.4+2.1A^v+2.16^vmean +2.14^v

9 2 54

223 122

A 56 16

+5 -1 -7

13 55 9

14

Oct. 21, 1905

Index RLB

9 14 44

350.4			
28.43	37.9		
166.8	<u>43.4</u>		
210.2	81.3	+2.16"	A

9 19 30

346.6			+2.14"
31.8	45.2		
170.4	<u>37.5</u>		
207.9	82.7	+2.12"	

Index L & A

9 26 57

260.8			
298.8	38.0		
74.6	<u>45.8</u>		
120.4	83.8	+2.02"	B

9 30 56

257.0			+2.12"
301.95	44.5		
80.0	<u>36.8</u>		
116.8	81.3	+2.16"	

9 89 187
9 22 62
5 -67
14 21 55

mean +2.13"

Oct. 21, 1905.

Index Led.

9 41 30

258.6

299.8

76.5

119.0

41.2

12.5

237.

+2.09"

IV

B

9 45 0

255.3

301.5

80.4

115.7

46.2

35.3

81.5

+2.12"

+2.15"

Index R4B

9 50 5

166.9

210.4

349.5

26.8

43.5

37.3

80.8

+2.17"

A

9 54 48

169.5

206.0

346.0

31.0

36.5

15.0

21.5

+2.16"

+2.15"

Mean +2.14"

190 83

9 47 51

5 -1 7

14 46 44

Oct. 21, 1905.

Index RLB

10 1 ⁴⁸
~~58~~

166.8

211.4

349.5

27.0

44.6

37.5

82.1

+2.13^v (A)VI

10 6 12

170.1

207.4

347.5

31.0

37.3

43.5

80.8

+2.17^v+2.1^v

Index Lead

10 11 20

75.6

121.1

262.6

297.0

45.5^v34.4^v79.9^v+2.20^v (B)

10 15 57

80.6

117.4

258.4

301.5

36.8^v43.1^v79.9^v+2.20^v+2.20^v

10	33	129
10	8	47
+5	-1	-7
15	7	40

mean +2.1^v

Oct 21 1905

Index L₂A

11 17 10

258.9

300.8

80.4

116.3

41.9[✓]35.9[✓]77.8[✓]+2.26[✓]VII

B

261.3

+2.22[✓]

11 19 32

296.6

35.3[✓]

74.8

45.2[✓]

120.0

80.5[✓]+2.14[✓]Index R₂B

11 23 8

167.0

209.5

350.3

28.0

42.5[✓]37.7[✓]80.2[✓]+2.19[✓]

A

170.0

+2.17[✓]

11 26 20

206.0

36.0[✓]

346.4

45.6[✓]

32.0

81.6[✓]+2.15[✓]

11 21 32

5 1 7

16 20 25

Mean +2.20[✓]

Oct. 21, 1905

Index R & B

165.8

VIII

11 31 4

209.8

44.0 ✓

351.8

35.3 ✓

27.1

79.3 ✓

+ 2.22 ✓

A

170.1

+ 2.24 ✓

11 33 30

204.9

34.8 ✓

347.0

43.4 ✓

30.4

78.2 ✓

+ 2.25 ✓

Index L & A

74.6

11 37 20

123.42.5

47.9 ✓

260.0

37.4 ✓

297.4

85.3 ✓

+ 2.04 ✓

B

79.8

+ 2.10 ✓

11 40 53

115.8

36.0 ✓

257.4

45.6 ✓

303.0

81.6 ✓

+ 2.15 ✓

mean + 2.17 ✓

11 35 42

5 -1 -7

16 34 35

S. J. 2 4m

H. A. - 2 42

Dec. + 79.6

P. A. 71.0 Ver B

Sprocket - 2.5

" - 1.5

W's watch used for times
 Hatch 1 m 7 sec fast

Oct. 23, 1905 (Monday)

Dis. Inf. I Phot. R H. Obs. Bowie Rec.
 compared with nearest of three Sats. (after eclipse)
 on free. side = Sat. III

The order of Sats. before eclipse on free. side
 was I, III, II, IV

B & b 1182

7		
7	15	30.0
7	16	29.7

B 394

7	15	0.0
7	16	0.0
7	17	0.0

7	27	24'
		32"
7	27	56
7	28	43'
		32"
7	29	15
7	29	54'
		32"
7	30	26

7	26	58
	27	17
	"	34
	"	46
	28	11
	"	28
	"	55
7	29	19
	"	34
	"	45

75.9'	70.4	69.5
80.0'		145.4
155.9'		66.0
78.0'		145.8
		66.2
78.8'		145.0
76.9'		70.7
155.7'		147.6
77.8'		68.1
77.9'		146.0
79.2'		
157.1'		
78.6'		

Oct. 23, 1905.

7	30	46	7	30	1	67.9
7	31	32	"	15	147.1	
7	31	18	"	27	68.2	
			"	39	79.0	
			"	52	80.8	147.2
			"	8	159.8	67.1
			31	8	79.9	147.9
			32	4	81.4	66.1
			"	18	79.3	147.5
			"	44	160.7	68.5
			33	2	80.4	147.8
			"	27	82.4	66.6
			"	56	79.8	149.0
			34	20	162.2	68.1
			"	35	81.1	147.9
			35	6	81.0	67.1
			"	29	81.0	148.1
			"	56	162.0	67.5
			36	11	81.0	148.5
			"	32	80.1	68.1
			37	16	81.6	148.2
			"	40	161.7	67.5
			38	2	80.8	149.1
			"	42		69.5
			"	55	76.4	
			39	9	82.5	145.9
			"	20	158.9	66.5
					79.4	

Oct. 23, 1905.

7	40	25	7	39	40	149.0
					51	68.4
	40	44		40	10	149.1
	40	56		"	22	67.2
	41	7		"	33	144.8
	41	18		"	44	71.1
	41	27		"	53	143.5
	41	41	41	7	69.5	72.0
	41	50	"	16	65.4	141.5
	42	0	"	26	62.4	76.1
	42	8	"	34	60.4	138.5
	42	19	"	45	56.9	78.1
	42	27	"	53	54.1	135.0
	42	36	42	2	48.2	80.9
	42	46	"	12	40.7	129.1
	42	55	"	21	39.6	88.4
	43	6	"	32	38.9	128.0
	43	18	"	44	32.1	89.1
	43	31	"	57		121.2
7	43	55	43	21		not seen later
			Limit of Vis.			
			43	51		88.0
7	44	23	44	8	32.0	120.0
		+34	"	24	33.3	88.5
7	44	57		44	65.3	110
			45	9	+2.7 32.6	121.8

Oct. 23, 1905.

B & B 1182
 7 53 24.2
 7 54 24.3

B 394
 7 54 0.0
 7 55 0.0

Jup. low but seeing in general pretty good for this altitude, the disc of Jup. however as well as the Sat. were not sharply defined as Jup. I approached the limb of Jup. said limb of Jup. at times (due to the seeing) would approach the Sat. under observation, rendering equalizations somewhat more dif. Great care however exercised throughout and eclipses considered good

From 7^h 17^m 50.^s to 7^h 24^m 33.^s add 31. sec.
 " 7 24 33. " 7 31 15. " 32. "
 " 7 31 15. " 7 37 52. " 33. "
 " 7 37 52. " 7 44 40. " 34. "
 " 7 44 40. " 7 51 23. " 35. "

Oct. 23, 1905.

Nova Aquilae No. 2 Phot. J. H. Obs. Bowie Res.

$$\begin{array}{r} 18 \quad 57 \quad -4.2 \\ 22 \quad 30 \\ \hline 3 \quad 33 \end{array}$$

Index Right

$$\begin{array}{r} 79.2 \\ 118.7 \end{array} \leftarrow \text{comp Star dis}$$

$$\begin{array}{r} 263.9 \\ 294.0 \end{array} \quad \begin{array}{r} 39.5 \\ 30.1 \\ \hline 69.6 \end{array} + 2.52$$

A

$$83.6 \quad + 2.53$$

$$\begin{array}{r} 113.3 \\ 257.9 \\ 297.1 \end{array} \quad \begin{array}{r} 29.7 \\ 39.2 \\ \hline 68.9 \end{array} + 2.54$$

Index Left

$$\begin{array}{r} 349.1 \\ 28.2 \\ 174.1 \\ 205.4 \end{array} \quad \begin{array}{r} 39.1 \\ 31.3 \\ \hline 70.4 \end{array} + 2.49$$

B

$$352.7 \quad + 2.48$$

$$\begin{array}{r} 23.8 \\ 169.3 \\ 208.9 \end{array} \quad \begin{array}{r} 31.1 \\ 39.6 \\ \hline 70.7 \end{array} + 2.48$$

$$\text{mean} + 2.50$$

$$8 \quad 24 \quad 38$$

$$\begin{array}{r} 8 \quad 37 \quad 42 \\ 61 \quad 80 \\ 8 \quad 30 \quad 70 \\ 5 \quad -47 \\ \hline 13 \quad 30 \quad 23 \end{array}$$

Oct. 23, 1905.

S.J. 23^h 11^m
 Jb. A. +4 13
 Dec. -4.2
 P. A. 42.6 var B
 Sprockets - 2.5 B
 " - 1.5 B

79.1905 Cephei.

Beraskis New Var. Phot. 3 H. Ok. Bonn Rec

28	34	+81.0
23	24	
5	10	
6	50	

For measurements see fol. page.

Oct. 23, 1905.

Index L4A

9 37 27

237.0	84.0	
321.0	70.3	
62.7	<u>154.3</u>	+0.49
133.0		

B

242.8		+0.42
315.7	72.9	
52.9	89.4	
142.3	<u>162.3</u>	+0.34

Index R4B

145.3		
230.7	85.4	
335.0	68.0	
43.0	<u>153.4</u>	+0.51

A

9 53 24	154.5	+0.47
90 51	223.4	68.9
9 45 26	324.0	88.5
5 -47	52.5	<u>157.4</u>
		+0.43
		Mean +0.44

14 44 39 S.J. oh 31m

H.A - 4 15

Dec +79.7

P.A. 250.5 B

Sprocket -2.5 B

" -1.5 B

Oct. 23, 1905.

V Vulpeculae Phot. 3 H. Obs. Bowie Res.

20	31	+260
24	35	Index 22B
4	4	

10 32 6

146.5 var. dis

230.4

83.9'

336.6

64.2'

40.8

148.1'

-0.61^v

B

156.7

-0.60^v

221.4

64.7'

327.0

84.4'

51.4

149.1'

-0.59^v

Index R2A

52.5

A

143.5

91.0'

242.8

70.3'

313.1

161.3'

-0.36^v-0.37^v

64.8

132.2

67.4'

232.0

92.6'

324.6

160.0'

-0.38^vMean -0.48^v

10 41 54

73 60

10 36 60

5 -47

15 36 13

Oct. 23, 1905

Same again.

Index Red

11	1	14	52.0		
			142.7	90.7	
			244.3	68.7	
			313.0	159.4	-0.39 ^v

(A)

	62.9		-0.36 ^v
	132.9	70.0	
	233.0	92.2	
	325.42	162.2	-0.34 ^v

Index L & B

	324.0		
	52.7	88.7 ^v	
	155.6	68.8 ^v	
	224.4	157.5 ^v	-0.43 ^v

(B)

	335.5		
	44.3	68.8 ^v	
	144.9	84.0 ^v	
	228.9	152.8 ^v	-0.52 ^v

-0.48^v
0.44

11	12	28
	13	42
11	6	51
5		-47
16	6	4

2.3. 1^h 44^m
 S.D. + 5 10
 Dec. + 26.4
 P.A. 140.0 Ver. B.
 Sprocket - 5.5 ca
 " - 4.5 B
 " - 4.0 b

Mean -0.42^v

Gen. mean = -0.45

It's watch used for times
 Hatch 47 sec. fast.

Oct. 23, 1905.

Dis. Jup. III. Phot. R. H. Obs. Bowie Rec.
 Comp. with nearer of two Sats. (after eclipse)
 on preceding side of Jup. = Sat. II The order
 of Sats. on prec. side (before eclipse) were III, II, IV.
 (reckoning outwards from planet)

B & b 1182

11 31 22.0

11 32 22.0

J 394

11 32 0.0

11 33 0.0

11 42 23
 + 39 ^
 11 43 2

11 43 46
 + 39 ^
 11 44 25

11 45 2
 + 40 ^
 11 45 42

11 46 17
 + 40 ^
 11 46 57

11 41 44

42 6

" 37

43 4

" 21

" 38

" 57

44 10

" 35

" 49

45 14

" 31

" 49

" 12

106.3 55.7
 108.4 162.0
 214.7 54.1
 -0.7 ^ 107.4 162.5

107.7 54.4
 107.0 162.1
 214.7 55.0
 -0.7 ^ 107.4 162.0

110.5 53.1
 106.5 163.6
 217.0 55.5
 -0.7 ^ 108.5 162.0

106.0 55.8
 107.5 161.8
 213.5
 -0.6 ^ 106.8

Oct. 23, 1905.

11	48	26		55.0	✓
		40		162.5	
11	48	7		111.5	53.5
		20		109.3	165.0
11	49	32		220.8	54.2
		45	-0.8	110.4	163.5
11	49	18		110.0	53.0
		38		109.7	163.0
11	50	59		219.7	55.0
		26	-0.8	109.8	162.3
11	50	41		164.7	
		1		112.5	52.0
11	52	19		109.3	164.5
		37		221.8	53.5
11	53	3	-0.8	110.9	162.8
		29		110.2	53.0
11	53	44		107.1	163.2
		8		217.3	54.4
11	54	30	-0.7	108.6	161.5
		2		104.6	55.4
11	55	15		99.0	160.0
		36		203.6	59.0
11	56	52	-0.5	101.8	158.0
		5		96.3	61.6
11	56	17		98.9	157.9
		31		195.2	60.5
11	57	58	-0.3	97.6	159.4

Oct. 23. 1905.

11	57	50	11	57	23	96.7	59.3	
		+41			42	93.2	156.0	11
11	58	31		58	0	189.9	62.0	
					15	-0.2	95.0	155.2
					31			
					43	98.4	58.7	
11	59	8			58	97.2	157.1	
		41			12	195.6	60.0	12
11	59	49		59	40	97.8	157.2	
					51		62.0	
					6	93.6	155.6	
12	0	12	12	0	20	90.6	65.5	13
		+41			32	184.2	156.1	
12	0	53			48	92.1	64.0	
					59	89.1	153.1	
					11	88.6	65.5	14
12	1	6		1	26	177.7	154.1	
		+41			47	88.8	64.2	
12	1	47			59	87.8	152.9	
					10	86.5	65.0	
12	2	5		2	23	174.3	151.5	
		+42			38	87.2	67.6	
12	2	47			49	83.4	151.0	
					3	77.5	70.5	
12	2	57	12	3	3	160.9	148.0	
		+42			17	80.4		
12	3	39						

Oct. 23, 1905.

12	4	1	12	3	40	77.3	70.5
		+42		"	54	75.7	147.8
12	4	43	4	"	10	153.0	70.2
			"	"	20	+0.5	76.5
			"	"	33		145.9
12	4	52	"	"	49	75.0	70.0
		+42	"	"	57	72.0	145.0
12	5	34	5	"	9	147.0	72.1
			"	"	21	+0.6	73.5
			"	"	43		144.1
12	5	58	6	"	18	69.8	73.2
		+42	"	"	28	67.9	143.0
12	6	40	"	"	42	+0.8	137.7
			"	"	58		68.8
12	7	8	7	"	17		74.1
		+42	"	"	33	+1.1	142.0
12	7	50	"	"	52		64.1
			"	"	3		77.0
12	8	9	8	"	14	60.4	141.1
		+42	"	"	28	124.5	77.7
12	8	51	"	"	39	62.2	138.1
			"	"	50		53.0
12	8	56	"	"	3	49.3	82.0
		+42	"	"	14	102.3	135.0
12	9	38	9	"	50	+1.6	51.2
			"	"	59		83.5
12	10	12	9	"	16		132.8
			"	"	30	+2.1	45.7
			"	"			85.5
			"	"			37.2
			"	"			82.9
			"	"			41.4
			"	"			126.0
			"	"			36.1
			"	"			89.9

Oct. 23, 1905

12	10	23 [^]	12	9	41	+2.5 [^]	34.8'	126.0
	10	36 ⁻			53	+2.5 [^]	34.7'	91.2
	10	54 [^]		10	11	+2.6 [^]	33.9'	125.9
	11	4 [^]			21	+2.7 [^]	32.5'	92.0
	11	16 [^]			33	+2.7 [^]	32.0'	124.5
	11	29 [^]			46	+3.0 [^]	28.3'	92.5
	11	49 [^]		11	6	+3.3 [^]	24.8'	120.8
	12	5 [^]			22	+3.2 [^]	26.0'	96.0
	12	28 [^]			45	+3.2 [^]	25.5'	122.0
	12	43 [^]		12	0	+3.4 [^]	23.5'	96.5
	12	59 [^]			26 ¹⁶			120.0
	13	29 [^]			46			not seen later

Limit of Vis.

12	13	36 [^]	12	13	8	20.8'	97.2
		+43 [^]		"	27	22.5'	118.0
12	14	19 [^]		"	44	43.3'	99.0
				14	3	+3.6 [^]	21.6'
							121.5

Seeing a little blurry, altitude high. When Sat. III became rather faint seeing became apparently somewhat more blurry, rendering observations somewhat dif. but observations made slowly and with much care. Eclipse considered good.

Oct. 23, 1905

B & b 1182

12 26 15.5

12 27 15.5

B 394

12 27 0.0

12 28 0.0

∴ From 11^h 36^m 31^s to 11^h 44^m 40^s add 39 sec.

.. 11 44 KA. .. 11 53 6 .. 40 ..

.. 11 53 6 .. 12 1 23 .. 41 ..

.. 12 1 23 .. 12 9 41 .. 42 ..

.. 12 9 41 .. 12 17 54 .. 43 ..

.. 12 17 54 .. 12 26 16 .. 44 ..

Reaph. of Jup. III Phot. R. V. Obs. Bowie Rec.
 comp. Sat was the same one as was used in
 the dis. of Jup. III tonight = Sat. II

B & b 1182

13 17 16.5

13 18 16.5

B 394

13 18 0.0

13 19 0.0

13	39	25 [^]	13	38	39	seen
	39	38 [^]		"	52	+2.4 [^] 36.8' 92.1
	39	59 [^]		39	13	+2.2 [^] 39.1' 128.9
	40	14 [^]		"	28	+2.2 [^] 39.7' 89.8
	40	32 [^]		"	45	+1.9 [^] 45.5' 129.5

Oct. 23, 1905

13	40	50	13	40	3	+1.9^	45.0	84.0
	41	6	"	"	19	+1.9^	46.0	129.0
	41	22	"	"	35	+1.8^	48.1	83.0
	41	39	"	"	52	+1.7^	49.9	131.1
	41	54	41	7		+1.4^	55.8	81.2
	42	16	"	29		+1.2^	59.5	137.0
	42	36	"	49		+1.1^	61.5	77.5
	43	0	42	13				139.0
			"	31				76.5
			"	54			64.5	141.0
13	43	2	"	13			72.0	74.0
		+47	43	32		+0.8^	136.5	146.0
13	43	49	"	51			68.2	72.2
			"	9			73.8	146.0
13	44	21	44	30			80.0	153.8
		+47	"	54		+0.5^	153.8	67.1
13	45	8	"	36			76.9	147.1
			45	56				67.0
13	46	4	"	14			87.0	154.0
		47	46	29			88.9	65.0
13	46	51	"	43		+0.1^	175.9	153.9
			"	1			88.0	62.8
13	47	10	47	17			94.2	157.0
		+45	"	37			96.5	62.0
13	47	58	"	55		-0.2^	190.7	158.5
			"	11			95.4	56.5
13	48	28	48					157.0
		+48						
13	49	16						

Oct. 23, 1905

13

48 41

49 5

" 18

" 31

50 4

" 18

" 33

" 52

51 7

" 23

" 43

52 1

" 30

" 49

53 9

" 34

" 51

54 5

" 21

" 39

55 18

" 41

56 4

" 22

" 38

13

$$\begin{array}{r} 13 \quad 49 \quad 48^{\wedge} \\ + 48^{\wedge} \\ \hline 13 \quad 50 \quad 36^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 50 \quad 59^{\wedge} \\ + 48^{\wedge} \\ \hline 13 \quad 51 \quad 47^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 52 \quad 16^{\wedge} \\ + 48^{\wedge} \\ \hline 13 \quad 53 \quad 4^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 53 \quad 47^{\wedge} \\ + 49^{\wedge} \\ \hline 13 \quad 54 \quad 36^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 55 \quad 26^{\wedge} \\ + 49^{\wedge} \\ \hline 13 \quad 56 \quad 15^{\wedge} \end{array}$$

$$\begin{array}{r} 13 \quad 56 \quad 54^{\wedge} \\ + 49^{\wedge} \\ \hline 13 \quad 57 \quad 43^{\wedge} \end{array}$$

$$\begin{array}{r} 100.5^{\cdot} \\ 102.1^{\cdot} \\ \hline 202.6^{\cdot} \\ -0.4^{\wedge} \quad 101.3^{\cdot} \end{array} \quad \begin{array}{r} 58.0 \\ 60.1 \end{array}$$

$$\begin{array}{r} 102.5^{\cdot} \\ 104.8^{\cdot} \\ \hline 207.3^{\cdot} \\ -0.5^{\wedge} \quad 103.6^{\cdot} \end{array} \quad \begin{array}{r} 57.5 \\ 60.0 \\ 54.2 \\ 159.0 \end{array}$$

$$\begin{array}{r} 106.0^{\cdot} \\ 105.5^{\cdot} \\ \hline 211.5^{\cdot} \\ -0.6^{\wedge} \quad 105.8^{\cdot} \end{array} \quad \begin{array}{r} 54.0 \\ 60.0 \\ 55.0 \\ 160.5 \end{array}$$

$$\begin{array}{r} 104.9^{\cdot} \\ 107.4^{\cdot} \\ \hline 212.3^{\cdot} \\ -0.6^{\wedge} \quad 106.2^{\cdot} \end{array} \quad \begin{array}{r} 56.0 \\ 60.9 \\ 53.6 \\ 161.0 \end{array}$$

$$\begin{array}{r} 107.5^{\cdot} \\ 110.0^{\cdot} \\ \hline 217.5^{\cdot} \\ -0.7^{\wedge} \quad 108.8^{\cdot} \end{array} \quad \begin{array}{r} 54.5 \\ 62.0 \\ 52.0 \\ 162.0 \end{array}$$

$$\begin{array}{r} 109.6^{\cdot} \\ 109.4^{\cdot} \\ \hline 219.0^{\cdot} \\ -0.8^{\wedge} \quad 109.5^{\cdot} \end{array} \quad \begin{array}{r} 53.5 \\ 63.1 \\ 54.1 \\ 163.5 \end{array}$$

$$\begin{array}{r} 109.8^{\cdot} \\ 111.5^{\cdot} \\ \hline 221.3^{\cdot} \\ -0.8^{\wedge} \quad 110.6^{\cdot} \end{array} \quad \begin{array}{r} 54.5 \\ 64.3 \\ 54.2 \\ 164.3 \end{array}$$

Oct. 23, 1905.

13	58	25	^	13	57	3	52.5	6
		+49	^		"	32	164.0	
13	59	14	^		"	51	112.0	
					58	11	111.1	
13	59	40	^		"	35	223.1	
		+49	^		59	2	-0.8 111.6	7
14	0	29	^		"	18	110.0	
					"	33	109.0	
14	0	50	^		"	47	219.0	
		+50	^		14	0	-0.8 109.5	2
14	1	40	^		"	20	110.0	
					"	40	110.5	
14	3	30	^		1	0	220.5	
		50	^		"	19	-0.8 110.2	9
14	4	20	^		"	36	111.5	
					"	51	110.0	
Wanted to count acts > 14					4	53	221.5	10
					5	39	-0.8 110.8	

Altitude very high. Obs. took eclipse, being down on his knees on the pier. Seeing fairly good, but on account of extreme altitude, settings had to be made slowly. Eclipse considered good.

Oct. 23, 1905.

B. 26. 1182

14	17	8.2
14	18	8.0

B 394

14	18	0.0
14	19	0.0

From 13^h 12^m 16^s to 13^h 25^m 22^s, add 44. pacs.

"	13	25	22.	"	13	32	22.	"	45.	"
"	13	32	22.	"	13	39	33.	"	46.	"
"	13	39	33.	"	13	46	34.	"	47.	"
"	13	46	34.	"	13	53	44.	"	48.	"
"	13	53	44.	"	14	0	50.	"	49.	"
"	14	0	50.	"	14	7	55.	"	50.	"
"	14	7	55.	"	14	15	0.	"	51.	"

Oct. 25, 1905. (Wednesday).

79.1905 = Imm. Caraskie's Saw Var.
 Plate # 5.

24 34 +41.0
 24 30
 -4 4

7 56
 Sunday left.

10 57

56.0
 140.7 24.7
 245.2
 316.5 70.7
 155.4

+0.47

+0.42

59.2
 136.1 76.3
 237.6 24.9
 322.0 161.2

+0.36

Sunday right

324.6 90.4
 55.0
 154.6 68.2
 223.0 154.6

+0.41

+0.42

325.0

89.5

55.2

154.0

67.1

221.8

156.9

+0.44

mean +0.42

11 21

21 78

10 69

16 9 0

Oct. 25. 1905

1 56 Lame. (Sid.)
 - 2 51 H. S.

+79.5 Dec.
 2507 P. H.
 -2.5 B } Spect.
 -15 C }

Oct. 26, 1905 (Thursday)

Prova Aquilae No. 2 Phot. J. H. Ok. Bowie Rec.

$$\begin{array}{r} 18 \quad 57 \quad -4.2 \\ 21 \quad 46 \\ + 2 \quad 49 \end{array} \quad \text{Index Right}$$

261.0 comp Star

298.1

37.1

84.8

27.1

111.9

64.2

+ 2.71

A

264.2

+ 2.68

290.5

26.3

78.5

39.1

117.6

65.4

+ 2.66

Index Left

170.9

207.3

353.6

22.6

36.4

29.0

65.4

+ 2.66

B

174.8

+ 2.68

202.6

27.8

350.2

36.3

26.5

64.1

+ 2.71

mean + 2.68

$$\begin{array}{r} 7 \quad 39 \quad 5 \\ 7 \quad 64 \quad 61 \\ 5 \quad 32 \quad 30 \\ 12 \quad 32 \quad 10 \end{array}$$

Oct. 26, 1905.

Index Left

7 56 58

172.5	34.1'
206.6	29.4'
353.0	<u>63.5'</u> + 2.73'
22.4	

B

174.5	28.4'	+ 2.68'
202.9	37.8'	
348.6	<u>66.2'</u> + 2.64'	
26.4		

Index Right

80.0	38.2'
118.2	27.7'
265.8	<u>65.9'</u> + 2.65'
293.5	

A

82.0 + 2.61

112.6	30.6'
258.8	37.5'
296.3	<u>68.1'</u> + 2.57'

meant 2.64'

8	7	1
15	63	59
7	61	60
5		-20
13	1	40

S.J. 22^h 55^m
 H.A. +3 57
 Dec -4.3
 P.A. 221.5^h B
 Sprockets -2.5 B
 -1.5 b

Oct. 26, 1905.

79. 1905 - Anne Lervaskie New Year Dist. Jk. Obs. Error Rec.

28	34	+ 81.0
----	----	--------

23	00
----	----

5	34
6	26

Index Left

54.4

← comp. star dis

140.8

86.4

242.3

73.4

315.7

159.8

+ 0.38

B

62.2

+ 0.37

134.6

72.4

234.8

88.9

323.37

161.3

+ 0.36

Index Right

324.7

52.4

87.7

152.7

70.0

222.67

157.7

+ 0.43

A

333.0

+ 0.43

43.5

70.5

144.3

87.1

231.4

157.6

0.43

mean + 0.40

8 44 36

9	6	30
17	50	66
8	55	33
5		-20
13	55	13

Oct. 26, 1905.

S.J. 23^h 54^m

D.A. -4 51

Dec. +79.5

P.A. 250.5 Var B

Sproket -2.5 B

" -1.5 b

035727 New Algol Var. Photo J. H. Oke Borealis

$$\begin{array}{r}
 3 \quad 58 \quad + 28.6 \\
 0 \quad 3 \\
 \hline
 3 \quad 55 \\
 2 \quad 5
 \end{array}$$

For measurements see fol. page

44

Oct. 26, 1905.

Index Left

346.4 var dis

9 38 30

30.2 43.8'

170.8 34.5'

205.3 78.3' -2.25'

B

351.5

-2.20'

27.4

35.9'

165.5

46.0'

211.5

81.9' -2.14'

Index Right

253.1

301.7

81.0

116.7 5.1

48.6'

34.1'

82.7'

-2.12'

A

260.5

-2.13'

296.8

36.3'

73.5

45.5'

119.0 +21.8

81.8'

-2.14'

Mean -2.16'

9 49 2

87 32'

9 43 46'

5 -20'

14 43 26'

2.3, 0^h 45^m

B. A. -3 13

Dec. +27.3

P. A. 310.4 var. B

Sprockets -1.5 B

" -0.5 b

Oct. 26, 1905

V Sulpeculæ Phot. 3 H. Obs. Bowie Res.

20 31 + 26.0

24 50

4 19

Index L & B

154.7 var dis

224.0

325.0

50.7

69.3

85.7

155.0 - 0.48

B

10 38 12

145.4

232.0

336.4

40.4

86.6

64.0

150.6 - 0.56

-0.52

Index R & A

65.5

133.4

231.6

324.2

67.9

92.6

160.5 - 0.37

A

50.9

140.4

243.9

313.5

89.5

69.6

159.1 - 0.40

-0.38

10 48 25

86 37

10 43 18

5 - 20

15 42 58

mean - 0.45

Oct. 26, 1905.

S.J. 1^h 32^m

H.A. +4 59

Dec. +26.3

P.A. 319.8 Ver. B

Sprocket -5.5 A

" -4.5 B

" -4.0 b

It's watch needs for times tonight
 Watch 20 sec. fast

Oct. 27, 1905 (Friday)

03 57 27 New Algol Var. Phot. 3 H. Obs. Same Rec

$$\begin{array}{r} 27 \quad 58 \\ 22 \quad 3 \\ \hline 25 \quad 55 \\ 76 \quad 5 \end{array}$$

+28.6

Index Left

164.6 var. dis

7 38 30

211.5

46.9'

352.3

34.8'

27.1

81.7' - 2.14'

170.2

- 2.16

204.8

34.6'

345.8

46.1'

31.9

80.7' - 2.17'

Index Right

76.0

122.4

261.0

296.7

46.4'

35.7'

82.1' - 2.13'

81.1

- 2.11

116.3

35.2'

254.0

48.3'

302.3

83.5' - 2.09'

Mean - 2.14

7 48 58

86 88

7 43 44

5 -5

12 43 39

Oct. 27, 1905.

S. J. 22^h 37^m

Ab. A 5 23

Dec. + 27.3

P. A. 310.3 Vir. B

Sprock - 1.5 B

" - 0.5 b

79. 1905 Mm. Beraski's New Year. Phot. 3 H. Ok. Grove, ^{Dec.}

28 34 + 81.0

22 46

5 48

6 12

8 13

Sky all cloudy in this region, no stars visible.

Oct. 27, 1905.

Index Left

55.5 comp. Star dis.

8 31 24

139.6

84.1'

I

244.4

69.5'

313.9

153.6'

+0.50'

64.6

+0.48'

133.0

68.4'

B

235.1

87.4'

322.5

155.8'

+0.46'

Index Right

325.5

51.6

86.1'

153.9

69.3'

223.2

155.4'

+0.47'

333.4

+0.50

43.0

69.6'

147.4

82.3'

229.7

151.9'

+0.54'

same +0.49'

8 44 34

8 75 58

8 37 59

5 -5

13 37 54

Troubled by clouds in last settings of
above group

Oct. 27, 1905.

Index Rights

~~328.0~~

blonde

II

9 8 10

146.4

229.8

336.2

43.2

83.4'

67.0'

150.4' + 0.57'

A

154.1

220.4

325.8

50.9

66.3'

85.1'

151.4' + 0.55'

+ 0.56'

Index Left

54.8

139.5

244.5

311.9

84.7'

67.4'

152.1' + 0.53

B

64.8

132.4

235.6

320.4

67.6'

84.8'

152.4' + 0.53

+ 0.53'

mean + 0.54'

9	18	45
9	26	55
9	13	28
5		-5
14	13	23

Oct. 27, 1905.

Index Left

9	35 2	237.0			
		320.2	83.2'		III
		63.8	<u>68.3'</u>		
		132.1	151.5'	+0.55'	B
		242.4		+0.50'	
		314.9	72.5'		
		54.0	<u>83.8'</u>		
		137.8	156.3'	+0.45'	

Index Right

		147.0			
		227.3	80.3'		
		329.5	<u>72.8'</u>		
		42.3	153.1'	+0.51'	A
		153.6		+0.51'	
		222.2	68.6'		
		325.5	<u>84.6'</u>		
		50.1	153.2'	+0.51	
				Mean +0.50'	

9	45	54
	80	56
9	40	28
5		-5
14	40	23

Troubled throughout above group by clouds

Oct. 27, 1905.

9 58

clouds more abundant again over the whole sky, pole star nearly invisible & in str. of first var. this evening sky clear. As observer was about beginning observations of this last var. sky began to grow more or less cloudy, only three groups could be taken in the run for possible secondary minimum. The atmospheric conditions during these three groups was in general pretty poor, great care however exercised and it seems pretty certain that there is a secondary min. The time of this secondary min. would theoretically be about 11^{hr} 30^{min} P.M. East Time. The troublesome clouds were not of ~~the~~ hard character but somewhat feathery and of a varying density. Clouds now more abundant and covering the whole sky hardly practically no stars visible, impossible to do anything further.

Sprocket - 2.5 B H. A + P. A could
 " - 1.5 B not be taken as
 tel. drifted in waiting for clearer sky and stars
 could not be set in the field

It's watch used for times tonight
 Sketch 5 sec. fast

Oct. 30, 1905 (Monday)

03 57 27 New Algal Var. Phot. J. H. Ok. Bowie Res.

27 58 + 28.6

22 15

5 43

+ 6 17

Index Right

77.0 ← var dis.

121.8

261.5

294.7

44.8 ✓

33.2 ✓

78.0 ✓

- 2.25 ✓

A

79.5

115.9

251.0

302.6

36.4 ✓

51.6 ✓

88.0 ✓

- 1.97 ✓

- 2.11 ✓

Index Left

345.7

30.7

169.5

204.2

45.0 ✓

34.7 ✓

79.7 ✓

- 2.20 ✓

B

351.5

25.5

163.7

210.2

34.0 ✓

46.5 ✓

80.5 ✓

- 2.18 ✓

- 2.19 ✓

Mean - 2.15 ✓

7 46 34

7 81 62

7 40 61

5 + 28

12 41 29

In first half of above group, images somewhat blurry, unsteady and somewhat lacking in sharpness of definition. In last part of group however images became

Oct. 30, 1905.

steadier and sharper so that obs in last half were made with greater ease. Extreme care exercised throughout and settings made slowly and cautiously. ~~Good~~ Mean value of group considered good.

S.J. 22^{hr} 47^m
 B.A. - 5 10
 Dec. + 27.3
 P.A. 130.5 Ser B
 Sprockets - 1.5 B
 " - 0.5 B

It might also be added that the altitude is a little low and the atmospheric conditions especially in the east are rather poor. In the east ^{to north east} there is some light ^{cloud} and foggy conditions. The lights on the State House are only barely visible.

79.1905 before (Name Beraski New Var) Phot J. H. Ok Bone, Dec.
 28 34 + 81.0
 22 58
 5 36
 6 24

For measurements see fol. page.

Oct. 30, 1905.

Index L & A

8 28 2
 231.8 *brmp. stars dis.*
 322.8
 62.2
 132.5

91.0 ✓
 70.6 ✓
 161.6 ✓ +0.35 ✓

242.7

+0.40 ✓

312.4

69.7 ✓

53.1

87.0 ✓

140.1

156.7 ✓

+0.44 ✓

B

Index R & B

142.5

231.1

88.6 ✓

332.8

70.4 ✓

43.2

159.0 ✓

+0.40 ✓

154.1

+0.40 ✓

A

8 37 35

222.4

68.3 ✓

5 65 37

322.9

90.9 ✓

5 32 48

53.8

159.2 ✓

+0.40 ✓

5 +28

13 33 162.5, 23^h 38^m

mean +0.40 ✓

H.A. -5^h 7^m

Dec. +76.6

P.A. 250.5 var B

Sprockts - 2.5 B

" -1.5 b

Oct. 30, 1905

Dis. ^{Int.} I Phot. R. K. Obs. Bowie Res.
 bamp. with nearer ^{to} ^{sup.} of two sats. (after eclipse)
 on preceding side = Sat. III

B. & b. 1182

9	8	9.5
9	9	9.3

B. 394

9	13	0.0
9	14	0.0

9	-16	1 [^]
	+4	+52 [^]
9	20	53 [^]

9	17	18 [^]
	+4	+52 [^]
9	22	10 [^]

9	15	34
	"	56
	16	10
	"	24
	"	54
	17	6
	"	30
	"	43

	76.0 [^]	68.8
	75.7 [^]	144.8
	<u>75.7[^]</u>	70.3
+0.5 [^]	151.7 [^]	146.0
	<u>75.8[^]</u>	70.6
	75.4 [^]	146.0
	<u>76.5[^]</u>	68.0
+0.5 [^]	151.9 [^]	144.5
	<u>76.0[^]</u>	

Oct. 30, 1905.

9	18	30 [^]	9	18	13	78.7 [^]	67.5	
	+4	+52 [^]		"	23	74.7 [^]	146.2	
9	23	22 [^]		"	37	153.4 [^]	70.2	3
				"	48	+0.5 [^] 76.7 [^]	144.9	
				19	6		68.7	
9	19	35 [^]		"	31	77.6 [^]	146.3	
	+4	52 [^]		"	45	74.0 [^]	71.0	4
9	24	27 [^]		"	59	151.6 [^]	145.0	
				"	36	+0.5 [^] 75.8 [^]	67.9	
9	21	3 [^]		"	50		145.0	
	+4	52 [^]		"	12	77.1 [^]	69.8	
9	25	55 [^]		21	34 ⁻	77.2 [^]	147.0	
				"	53	154.3 [^]	68.1	
9	22	20 [^]		22	11	78.4 [^]	146.5	6
	+4	+52 [^]		"	29	78.2 [^]	69.3	
9	27	12 [^]		"	46	156.6 [^]	147.5	
				"	23	+0.4 [^] 78.3 [^]	68.5	
9	24	6 [^]		"	52	80.4 [^]	148.9	
	4	53 [^]		24	27	78.1 [^]	69.4	7
9	28	59 [^]		"	43	158.5 [^]	147.5	
				25	9	+0.4 [^] 79.2 [^]	67.0	
9	25	30 [^]		"	23	80.5 [^]	147.5	
	4	53 [^]		"	35	80.0 [^]	68.5	8
9	30	23 [^]		"	54	160.5 [^]	148.5	
				26	15	+0.4 [^] 80.2 [^]	67.3	
9	26	43 [^]		"	30	80.5 [^]	147.8	
	+4	+53 [^]				80.6 [^]		
9	31	36 [^]				161.1 [^]		
						+0.4 [^] 80.6 [^]		

Oct. 30, 1905.

9	28	17	9	26	45	67.8	9
	+4	+53		27	21	148.0	
9	33	10		"	50	80.7	
34	2			28	3	81.0	
34	28			"	28	161.7	
34	49			"	48	+0.4 80.8	
35	2			29	9	+0.3 81.3	
35	18			"	35	+0.3 81.0	
35	32			"	56	+0.5 78.1	
35	41			30	9	+0.5 75.9	
35	50			"	25	+0.6 74.7	
35	58			"	38	+0.7 71.9	
36	8			"	47	+0.8 69.8	
36	18			"	56	+0.8 68.3	
36	27			31	4	+0.9 66.5	
36	37			"	14	+1.1 63.3	
36	46			"	24	+1.1 63.3	
36	57	9		"	33	+1.1 61.5	
37	6			"	43	+1.3 58.5	
37	15			"	52	+1.3 56.5	
37	23			32	3	+1.6 51.7	
37	34			"	12	+1.7 49.7	
37	44			"	21	+1.8 46.9	
				"	29	+2.1 40.9	
				"	40	+2.6 33.7	
				"	50		

Oct, 30, 1905

9

33

15

Note seen later

Limit of vis.

9

33

49

23.4^ 97.1

9	34	12	^
	+4	+54	^
9	39	6	^

34

2

25.0^ / 20.5

"

23

48.4^ 95.0

"

36

+3.3^ 24.2^ / 20.0

B. & b. 1182

9

38

5.5

9

39

5.5

B. 394

9

43

0.0

9

44

0.0

Seeing somewhat blurry. This occasioned trouble especially as stars became faint since the blurry disk of Jup. would come very near the two stars in question, settings consequently made slowly and with as much care as possible. Had the disk of Jup. been hard and sharp so that it did not approach the stars, one or two more settings could, probably have been obtained at the end.

∴ From 9^h 7^m 30^s to 9^h 15^m 15^s add 4^m 5^s 1^s
 " 9 15 15 " 9 22 22 " 4 22.
 " 9 22 22 " 9 30 29 " 4 23.
 " 9 30 29 " 9 38 25 " 4 24.

60

Oct. 30, 1905.

S. S. Sulpeculæ Phot. J. H. Oke. Barre Rec.

20	31	+ 26.0
24	56	
4	25	

Index Rect

10 47 1

234.8

323.0

62.2

132.8

242.3

313.8

52.0

142.3

← var. dia.

88.2 ✓

70.6 ✓

158.8 ✓ - 0.40 ✓

- 0.38 ✓

71.5 ✓

90.3 ✓

161.8 ✓ - 0.35 ✓

Index L & B

141.0

232.6

334.0

40.0

154.0

223.49

324.0

52.3

91.6 ✓

66.0 ✓

157.6 ✓ - 0.43 ✓

- 0.42 ✓

69.9 ✓

88.3 ✓

158.2 ✓ - 0.42 ✓

mean - 0.40 ✓

10 55 47

102 48

10 51 24

5 + 28

15 51 52

Oct. 30, 1905.

S.J. 2^h 2^m
H.A. +5 29
Sec. +26.4
P.A. 140.5 Ver B
Sprockets -5.5 d
" -4.5 B
" -4.0 b

It's watch used for times tonight
Watch 28 sec. slow

62

Nov. 1, 1905 (Wednesday)

035727 New Algol Var. Phot. 3 1/2 hr B. mic. Rec

27 58 +28.6

22 20 Index Left

5 38

6 22

347.3 var. dis

33.2

45.9'

172.8

31.8'

204.6

77.7'

-2.26'

B

352.8

-2.24'

25.0

32.2'

165.4

47.0'

213.4

79.2'

-2.22'

Index Right

254.4

304.2

81.0

116.4

49.8'

A

35.4'

85.2'

-2.05'

261.5

-1.98'

298.8

37.3'

72.5

52.5'

125.0

89.8'

-1.92'

Mean -2.11'

7 41 47

71 68

7 35 74

5 +18

12 36 32

Nov. 1, 1905

Index Right

Same again.

8 1 52

256.1

302.0

81.4

116.5

45.9'

35.1

81.0'

- 2.17'

A

261.1

297.2

73.4

123.7

36.1'

50.3'

86.4'

- 2.01'

- 2.09'

Index Left

167.3

211.8

353.0

251.4

44.5'

32.4'

76.9'

- 2.29'

B

173.8

205.1

345.5

32.0

31.3'

46.5'

77.8'

- 2.26'

- 2.28'

8 13 18

14 70

8 7 35

5 + 18

13 7 53

2.3. 23^h 19^m

R.A. -4 40

Dec. + 27.4

P.A. 130.5 Ver. B

Sprockets -1.5 B

" -0.5 b

Mean - 2.78'

Nov. 1. 1905.

79.1905 Anneberashie's Gap. Phot. J. H. Oke. Bowie Rec

$$\begin{array}{r}
 28 \quad 34 \quad +81.0 \\
 23 \quad 24 \\
 \hline
 5 \quad 10 \\
 6 \quad 50
 \end{array}$$

Index L & A

54.4 = comp star dis

143.4

244.2

313.7

89.0'

69.5'

158.5' + 0.41'

B

64.0

132.3

232.6

325.4

68.3'

92.8'

161.1' + 0.36'

+ 0.38'

Index R & B

324.6

53.5

155.8

222.1

88.9'

66.3'

155.2' + 0.47'

A

335.3

43.8

144.9

232.5

68.5'

87.6'

156.1' + 0.46'

+ 0.46'

Mean + 0.42'

$$\begin{array}{r}
 8 \quad 56 \quad 24 \\
 \hline
 102 \quad 67 \\
 8 \quad 51 \quad 34 \\
 5 \quad \quad \quad +18 \\
 \hline
 13 \quad 51 \quad 52
 \end{array}$$

Nov. 1, 1905.

S.J. 0^h 5^m.
 B.A. -4 40
 Dec. +79.5
 G.A. 251.0 Ver B
 Sprockets -2.5 B
 " -1.5 b

of Lygna Phot 3 H. Obs Bowe Rec
 20 40 +33.4
 24 25

 3 45

Full aperture used

For measurements see fol. page

66

Nov. 1, 1905.

Index L & A

162.2 ← var. dis

213.94

353.5

26.8

51.2

33.3

84.5

-2.06

B

172.9

206.7

344.4

34.2

33.8

49.8

83.6

-2.08

-2.09

Index Q & B

73.5

124.4

262.5

295.1

50.9

32.6

83.5

-2.09

A

83.1

-2.10

9 59 0

115.4

253.0

303.42

32.3

50.2

82.5

-2.12

Mean -2.09

9 108 34

9 54 17

5 +18

14 54 35

S.J. 1st 5^m

H.A. + 4 15

Dec +34.7

P.A. 229.0 var B

Sprockets -0.5 d

" +0.5 B

" +1.0 b

Nov. 1, 1905

V Unipetulae Phot. 5 H. Ok. B. noie Rec.

$$\begin{array}{r}
 20 \quad 31 \quad +26.0 \\
 25 \quad 10 \\
 \hline
 4 \quad 39
 \end{array}$$

Index R & A

230.5 var, die

325.5

65.5

132.7

95.0'

67.2'

$$\frac{162.2'}{-0.34'}$$

A

243.5

315.5

51.3

147.0

72.0'

95.7'

$$\frac{167.7'}{-0.23'}$$

-0.28'

Index L & B

143.9

234.3

336.3

42.1

90.4'

65.8'

$$\frac{156.2'}{-0.45'}$$

B

155.2

223.5

323.0

54.4

68.3'

91.4'

$$\frac{159.7'}{-0.39'}$$

-0.42'

10 31 28

51 62

10 25 61

5 +18

15 26 19

Mean -0.35'

68

Nov. 1, 1905

Index L4B

Same again.

10 44 18

145.0
232.6
334.2
43.2

87.6
69.0
156.6 -0.45'

154.8
226.5
323.0
53.7

71.7
90.7
162.4 -0.33'

-0.39'

B

Index Recd

51.6
146.0
244.4
314.9

94.4
70.5
164.9 -0.29'

A

64.4

-0.28'

10 52 5

96 23
10 48 12
5 +18

15 48 30

134.8
231.5
326.5

70.4
95.0
165.4 -0.28'

mean -0.34'

L.S. 1st 58^m

L.A. +5 23

Dec. +26.4

P.A. 320.0 Ser. B

Sprockets -5.5 A

" -4.5 B

" -4.0 C

His watch used for times
Sketch 18 sec. slow

Nov. 2, 1905 (Thursday)

79. 1905 Mme. Beraschi's Var (bephei) Phot J K Lk Bowe, ^{Rec}

28 34 +81.0

22 24

6 10

5 50

Index Left & above
61.2 ^{comp} star dis 73.8

135.0

250.2

307.0

56.8'

130.6' + 0.97'

I

B

71.1

126.1

242.3

315.1

55.0'

72.8'

127.8' + 1.03

+1.00

Index Right & below

334.0

43.0

162.7

215.5

69.0

52.8

121.8' + 1.15

W

342.0

35.0

155.0

223.0

53.0

68.0

121.0' + 1.17

+1.16

+1.08

7 46 33

79 37

7 39 48

5 + 22

12 40 10

Nov. 2, 1905.

Index Right & below

II

7 53 36

337.8

41.8

164.1

216.2

64.0'

(52.1'

116.1'

+1.28"

A

343.8

35.5

156.0

222.7

51.7'

(66.7'

118.4'

+1.23"

+1.26"

Index Left & above

243.6

313.9

72.3

125.0

70.3'

(52.7'

123.0'

+1.13"

B

251.0

306.7

64.2

132.5

55.7'

68.3'

124.0'

+1.11"

+1.12"

8 5 34

15 58 70

7 59 35

5 + 22

12 59 57

Mean + 1.19"

Nov. 2, 1905.

Index Left & Above

777

8 12 17

243.8

313.6

73.6

125.5

69.8

51.9

121.7

+ 1.16"

B

253.0

306.3

65.3

132.5

53.3

67.2

120.5

+ 1.17"

+ 1.18"

Index Right & Below

156.8

221.3

341.1

32.0

64.5

50.9

115.4

+ 1.29"

A

165.6

212.9

337.9

40.3

47.3

62.4

109.7

+ 1.36"

+ 1.42"

Mean + 1.26"

8 25 20

37 37

8 18 48

5 + 22

13 19 10

72

Nov. 2, 1905.

Index Right & Below

IV

8 37 48

159.2		
218.0	58.8'	
344.0	<u>49.2'</u>	
33.2	108.0'	+1.46'

A

165.9		
213.6	47.7'	+146'
338.4	<u>59.9'</u>	
38.3	107.6'	+147'

Index 2 & A

68.0		
130.0	62.0'	
253.9	<u>49.1'</u>	
303.0	111.1'	+1.39'

B

8	50	30
	87	78
8	43	69
5		+22
13	44	31

75.2		
124.4	49.2'	+1.35'
245.4	<u>65.4'</u>	
310.8	114.6'	+1.31'

Mean + 1.40"

Nov. 2, 1905.

Index L & A

V

8 57 3

68.4

128.9

255.0

303.5

60.5'

48.5'

109.0'

+1.44"

B

75.2

123.2

246.6

309.8

48.0'

63.2'

111.2'

+1.42"

+1.39"

Index R & B

339.4

37.5

167.3

210.9

58.1'

43.6'

101.7'

+1.61"

A

346.9

32.1

160.6

218.4

45.2'

57.8'

103.0'

+1.60"

+1.58"

Mean + 1.51"

9 8 56

17 65 59

8 62 60

9 3 0

5 +22

14 3 22

74

Nov. 2, 1905.

VI

Index R & B

9 19 39

342.2

37.0

169.4

208.5

54.8'

39.1'

93.9' + 1.81"

A

348.4

30.4

162.2

216.4

42.0

54.2

96.2 + 1.75"

+ 1.78"

Index L & A

250.4

308.7

78.5

120.1

58.3'

41.6'

99.9' + 1.66"

B

258.0

301.7

70.4

127.3

43.7'

56.9'

100.6' + 1.64"

+ 1.65"

Mean + 1.72"

9 34 14

9 53 53

9 26 56

5 + 22

14 27 18

9

9

5

14

Nov 2 1905

Index L & A

9	44	0	251.5			<u>VII</u>
			307.0	55.5'		
			78.2	41.7'		
			119.9	<u>97.2'</u>	+1.73"	(B)
			258.0			
			301.6	43.6'	+1.72"	
			71.8	54.6'		
			126.4	<u>98.2'</u>	+1.70"	

Index R & B

164.8	49.2'		
214.0	38.6'		
350.3	<u>87.8'</u>	+1.97"	(A)
28.9			

9	57	34	169.6	37.9'	+1.96"
			207.5	51.3'	
			343.0	<u>89.2'</u>	+1.94"
			34.3		
9	101	34			
9	50	47			
5		+22			
14	51	9			

Mean +1.84"

Nov 2, 1905.

Index R & B

VIII

10 11 29

165.4

212.2

351.1

28.2

46.8

37.1

83.9

+ 2.08

A

169.5

207.7

345.1

33.7

38.2

48.6

86.8

+ 2.04

+ 2.00

Index L & A

72.7

123.1

258.7

300.6

50.4

41.9

92.3

+ 1.85

B

79.2

120.8

254.5

305.0

41.6

50.5

92.1

+ 1.86

+ 1.86

10 25 15

36 44

10 18 22

5 + 22

15 18 44

Mean + 1.95

Nov. 2, 1905.

Index L & A

10 35 15

74.0

122, 5

259.6

298.9

48.5'

39.3

87.8

 $+ 1.97 -$ 

80.0

118.1

254.4

305.1

38,1

50.7

88,8

+ 1.95

 $+1.96$

Index R & B

347.5

33.4

170.6

205.4

45.9

34,8

80.7

+ 2,17 "



352,5

27.3

164.5

209.8

34.8

45.3

80.1

+ 2.19²

+ 2.18

10 48 38

83 53

10 41 56

5 + 22

15 42 18

Mean + 2.07

Nov. 2, 1905.

Index Q & B

11 8 3

348.2

X

32.7

44.5

171.1

34.2

205.3

78.7

+ 2.23"

Q

354.0

27.1

165.6

209.6

33.1

+ 2.26"

44.0

77.1

+ 2.28"

Index L & A

255.2

304.2

81.5

116.1

49.0

34.6

83.6

+ 2.09"

B

261.8

296.3

74.4

121.7

34.5

+ 2.12"

47.3

81.8

+ 2.14"

11 20 56

28 59

11 14 30

5 + 2.2

16 14 52

Mean + 2.19"

Nov. 2, 1905.

Index L & A

XI

11. 30 55	256.4		
	304.5	48.1	
	81.5	34.6	
	116.1	<u>82.7</u>	+ 2.12" B

262.1		+ 2.10"
297.5	35.4	
72.3	<u>49.0</u>	
121.3	84.4	+ 2.07"

Index R & B

167.4		
209.5	42.1	
354.3	<u>31.5</u>	
25.8	73.6	+ 2.39" Q

171.5		+ 2.33"
-------	--	---------

11 41 38

205.6

34.1

+ 2.33"

11 71 93

348.2

43.3

11 35 76

31.5

77.4 + 2.27"

5 + 22"

16 36 38

S.J. 2^h 52^m

H.O. -1 53

Dec. +79.9

P. O. 250.0 Ver. B.

Sprockets -2.5 B

" -1.5 B

Mean + 2.22"

It's watch used for times tonight
 It's 22 sec slow

Nov. 4, 1905 (Saturday)

03 57 27 New Algol Var. Phot. J. H. Ok. Snow Rec.

27 58 +28.6

22 38

5 20

6 40

Index Left

167.2 ← var. dis

211.1

353.0

25.2

43.9'

322'

76.1' -2.31

B

174.2

204.9

346.5

32.4

30.7'

-2.30

45.9'

76.6' -2.30

Index Right

74.1

123.6

262.4

297.5

49.5'

35.1'

84.6' -2.06

A

82.2

-2.05

116.2

34.0'

253.2

51.3'

304.5

85.3' -2.04

Mean -2.18

7 53 2

93 10

7 46 35

5 +21

12 46 56

Nov. 4, 1905.

S.J. 23^h 10^m
 H.A. - 4 50
 Dec + 27.2
 P.A. 310.4 Var B
 Sprocket - 1.5 B
 " - 0.5 B

79. 1905 *Mme. Beraski's Var. Cephei*
 28 34 + 81.0
 23 16
 5 18
 6 42

The comp. stars for above var. which has
 hitherto been used turns out to be ^{on examination with high power} ~~as~~ was sus-
 pected, a rather close double.

Nov. 4, 1905.

Delphini

Photo. J. H. Ok. Bowie Rec.

20	31
<u>23</u>	<u>55</u>
3	24

+17.8

Index L & A

151.0 comp. star dis

I

9 4 6

226.3

339.4

36.3

75.3'

56.9'

132.2' +0.93'

B

9 6 48

159.5

218.6

331.4

46.0

59.1'

74.6'

133.7' +0.90'

+0.92'

Index L & B

9 9 50

59.2

136.4

249.7

307.9

77.2'

58.2'

135.4' +0.87'

D

9 12 48

70.4

128.9

240.0

317.8

58.5'

77.8'

136.3' +0.85'

+0.86'

9	31	152
9	7	83
5		+21

14	8	44
----	---	----

Mean +0.89'
 +9.31"
 10.20"

Nov. 4, 1905.

Index RAB

II

9 16 50

$$\begin{array}{r} 58.4 \\ 138.86 \\ 251.0 \\ \hline 308.6 \end{array}$$

$$\begin{array}{r} 80.2' \\ 57.6' \\ \hline 137.8' \end{array} + 0.82'$$

A

9 19 22

$$\begin{array}{r} 71.3 \\ 127.6 \\ 239.4 \\ \hline 317.2 \end{array}$$

$$\begin{array}{r} 56.3' \\ 77.8' \\ \hline 134.1' \end{array} + 0.89'$$

+0.86

Index L & A

9 23 25

$$\begin{array}{r} 331.8 \\ 47.81 \\ 162.0 \\ \hline 216.0 \end{array}$$

$$\begin{array}{r} 75.3' \\ 54.0' \\ \hline 129.3' \end{array} + 0.99'$$

B

9 26 10

$$\begin{array}{r} 345.0 \\ 33.4 \\ 153.0 \\ \hline 224.6 \end{array}$$

$$\begin{array}{r} 48.4' \\ 71.6' \\ \hline 120.0' \end{array} + 1.19'$$

+1.09

$$\begin{array}{r} 84 \ 107 \\ 9 \ 21 \ 27 \\ 5 \quad \quad + 21 \\ \hline 14 \ 21 \ 48 \end{array}$$

$$\begin{array}{r} \text{Mean} + 0.98' \\ + 9.31' \\ \hline 10.29' \end{array}$$

84

Nov. 4, 1905

Index L & A

9 31 22

334.2

44.1

161.3

216.0

69.9'

54.7'

124.6'

+ 1.09'

III

B

9 34 32

344.4

34.9

154.3

222.4

50.5'

68.1'

118.6'

+ 1.22'

+ 1.16'

Index R & B

9 39 28

243.1

315.4

74.5

125.9

72.3'

51.4'

123.7'

+ 1.11'

A

9 42 48

253.1

306.5

60.9

134.0

53.4'

73.1'

126.5'

+ 1.05'

+ 1.08'

9 146 130

9 36 62

5 + 21

14 37 23

Mean + 1.12'

+ 9.31'

10.43'

Nov. 4 1905

Index RLB

9	48	0	243.4	31 3 3.3	69.9'	A
			74.4		48.9'	
			123.3		<u>118.8'</u>	
					+1.22'	

9	52	14	253.3		51.7'	+1.22'
			305.0		67.5'	
			65.9		<u>119.2'</u>	+1.21'
			133.4			

Index LLA

9	56	24	156.2	223.1	66.9'	B
				347.6	44.5'	
				32.1	<u>111.4'</u>	
					+1.39'	

9	59	22	165.4	214.0	48.6'	+1.36'
				336.8	64.9'	
				41.7	<u>113.5'</u>	+1.34'

9	53	60	
5		+21	
14	54	21	

S.I.	1 ^h	22 ^m
H.A.	+4	45

Dec. +18.0

P.D. 349.5 Ver. B

Sprocket - 0.5 B

" + 0.5 b

Mean +1.29'

+9.31'

10.60'

Measurements rather
dif. on account of bright
moonlight, faintness of
objects, and decreasing alt.
but extreme care exercised.

Nov. 4, 1905.

New Comp. Star (+40° 160 (95)) comp. with old comp. star +79° 15' (93)
179.1905 Inner Berastis Var. Phot. 3 H. Obs. Bowie

$$\begin{array}{r} 4 \\ 1 \\ 3 \\ 8 \end{array} \quad \begin{array}{r} 34 \\ 28 \\ 6 \\ 54 \end{array} \quad +81.0$$

10 35 40

Index L4A +79° 15' 7 (93)
51.0 old comp star ~~new~~ dis.

$$147.36.9$$

$$242.1$$

$$318.4$$

$$95.9'$$

$$76.3'$$

$$172.2' + 0.15'$$

B

$$60.0$$

$$138.0$$

$$231.9$$

$$325.0$$

$$78.0'$$

$$93.1'$$

$$171.1' + 0.17'$$

+0.16°

Index R4B

$$322.5$$

$$56.6$$

$$153.0$$

$$225.0$$

$$94.1'$$

$$72.0'$$

$$166.1' + 0.26'$$

A

$$330.4$$

$$44.24$$

$$144.1$$

$$234.0$$

$$74.0'$$

$$89.9'$$

$$163.9' + 0.30'$$

+0.28°

$$10 \quad 42 \quad 20$$

$$10 \quad 77 \quad 60$$

$$10 \quad 38 \quad 60$$

$$5 \quad +21$$

$$15 \quad 39 \quad 21$$

mean +0.22°

∴ New Comp. Star (+40° 160 (95)) by above group, is
+0.22 mag. fr. than old comp. star +79° 15' 7 (93)

Nov. 4, 1905

S.J. 1st 57^m
 G.H. - 2 50
 Dec. +79.6
 P.A. 228.4 Ver. B
 Sprockets - 5.5 B
 " - 4.5 b

Var. 79. 1905.
 New Comp. Star to be used in connection with ~~435727~~
 (New Hylol Var.) is $+20^{\circ} 160 (95)$.
 Old Comp. Star for same Var. (~~not~~ now to be abandoned as it is a rather close double and gives trouble) is $+79^{\circ} 157 (93)$

V Vulpeculae Phot. 3 V. Obs. Bowie Rec.

20	31	+26.0
26	00	
+5	29	
6	31	

For measurements see fol. page.

Nov. 4, 1905.

Index Red

241.0 *varadi*

319.6 78.6

49.6 98.4

148.0 177.0

- 0.06

A

231.0

328.6 97.6

59.6 77.9

137.5 175.5

- 0.08

- 0.07

Index L & B

155.4

222.3 66.9

323.0 91.6

54.6 158.5

- 0.41

B

144.0

234.5 90.5

334.5 70.4

44.9 160.9

- 0.36

- 0.38

Means - 0.22

11 7 18

21 65 48

10 62 54

5 +.21

16 3 15

S.J. 2nd 24^{mm}

Z.C. + 5 50

Dec. + 26.2

P. A. 140.5 Ver B

Sprockets - 5.5 A

" - 4.5 B

" - 4.0 C

K's watch used for times
Watch 21 sec. slow.

Nov. 6, 1905 (Monday)

U Vulpeculae

20	31	+26.0
25	48	
5	17	

Abandoned, not time enough before eclipse

Dis. Inf. I Phot. R & Oh. Bowie Rec.
Before eclipse there are three Sats. on
prec. side of planet, their order in distance
from the planet is I, III, II. Sat IV is
just above and south of the planet. Comp.
Sat. used tonight is the middle ^{one} of these
three prec. Inf. before the eclipse = Sat. III.

B. & b. 1182

10	55	39.0
10	56	39.0

B. 394

10	56	0.0
10	57	0.0

Nov. 6, 1905.

11² 3 (blonds)

11

$$\begin{array}{r}
 11 \quad 11 \quad 22^{\wedge} \\
 + 24^{\wedge} \\
 \hline
 11 \quad 11 \quad 46^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 12 \quad 36^{\wedge} \\
 + 24^{\wedge} \\
 \hline
 11 \quad 13 \quad 0^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 13 \quad 42^{\wedge} \\
 + 24^{\wedge} \\
 \hline
 11 \quad 14 \quad 6^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 16 \quad 12^{\wedge} \\
 + 25^{\wedge} \\
 \hline
 11 \quad 16 \quad 37^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 17 \quad 31^{\wedge} \\
 + 25^{\wedge} \\
 \hline
 11 \quad 17 \quad 56^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 18 \quad 46^{\wedge} \\
 + 25^{\wedge} \\
 \hline
 11 \quad 19 \quad 11^{\wedge}
 \end{array}$$

$$\begin{array}{r}
 11 \quad 20 \quad 10^{\wedge} \\
 + 26^{\wedge} \\
 \hline
 11 \quad 20 \quad 36^{\wedge}
 \end{array}$$

$$10 \quad 59$$

$$11 \quad 15$$

$$" \quad 28$$

$$" \quad 44$$

$$12 \quad 15$$

$$" \quad 28$$

$$" \quad 40$$

$$" \quad 59$$

$$13 \quad 12$$

$$" \quad 35$$

$$" \quad 48$$

$$14 \quad 12$$

$$15 \quad 48$$

$$16 \quad 6$$

$$" \quad 20$$

$$" \quad 35$$

$$" \quad 59$$

$$17 \quad 20$$

$$" \quad 42$$

$$18 \quad 4$$

$$" \quad 26$$

$$" \quad 34$$

$$" \quad 56$$

$$19 \quad 10$$

$$" \quad 38$$

$$" \quad 55$$

$$\begin{array}{r}
 82.3^{\wedge} \quad 246.8 \\
 82.0^{\wedge} \quad 329.1 \\
 \hline
 164.3^{\wedge} \quad 246.2 \quad 1 \\
 + 0.3^{\wedge} \quad 82.2^{\wedge} \quad 328.2
 \end{array}$$

$$\begin{array}{r}
 79.3^{\wedge} \quad 250.2 \\
 83.5^{\wedge} \quad 329.5 \\
 \hline
 162.8^{\wedge} \quad 246.0 \quad 2 \\
 + 0.3^{\wedge} \quad 81.4^{\wedge} \quad 329.5
 \end{array}$$

$$\begin{array}{r}
 83.3^{\wedge} \quad 245.5 \\
 82.6^{\wedge} \quad 328.8 \\
 \hline
 165.9^{\wedge} \quad 245.2 \quad 3 \\
 + 0.3^{\wedge} \quad 83.0^{\wedge} \quad 327.8
 \end{array}$$

$$\begin{array}{r}
 83.1^{\wedge} \quad 245.0 \\
 83.3^{\wedge} \quad 328.1 \\
 \hline
 166.4^{\wedge} \quad 245.1 \quad 4 \\
 + 0.3^{\wedge} \quad 83.2^{\wedge} \quad 328.4
 \end{array}$$

$$\begin{array}{r}
 82.0^{\wedge} \quad 246.1 \\
 84.2^{\wedge} \quad 328.1 \\
 \hline
 166.2^{\wedge} \quad 244.5 \quad 5 \\
 + 0.3^{\wedge} \quad 83.1^{\wedge} \quad 328.7
 \end{array}$$

$$\begin{array}{r}
 80.1^{\wedge} \quad 246.9 \\
 81.5^{\wedge} \quad 327.0 \quad 6 \\
 \hline
 161.6^{\wedge} \quad 246.5 \\
 + 0.4^{\wedge} \quad 80.8^{\wedge} \quad 328.0
 \end{array}$$

$$\begin{array}{r}
 83.5^{\wedge} \quad 246.3 \\
 84.4^{\wedge} \quad 329.8 \\
 \hline
 167.9^{\wedge} \\
 + 0.2^{\wedge} \quad 84.0^{\wedge}
 \end{array}$$

Nov. 6, 1905.

11	20	14	245.6	7
	"	53	330.0	
11	21	19	85.5^ 245.0	
	"	44	85.9^ 330.5	
11	22	8	171.4^ 244.5	P
	"	38	+0.2^ 85.7^ 330.4	
11	23	46	85.3^ 244.2	
	"	7	84.0^ 329.5	
11	24	38	169.3^ 245.0	9
	"	6	+0.2^ 84.6^ 329.0	
11	25	31	85.5^ 245.0	
	"	52	86.1^ 330.5	
11	26	12	171.6^ 244.9	10
	"	33	+0.2^ 85.8^ 331.0	
11	27	55	86.5^ 244.5	
	"	11	84.4^ 331.0	11
11	28	24	170.9^ 245.1	
	"	50	+0.2^ 85.4^ 329.5	
11	29	22	24	→
	"	36	+0.3^ 83.3^ 245.5	
11	30	47	+0.4^ 78.8^ 328.8	
	"	2	+0.6^ 74.1^ 250.0	
11	31	14	+0.6^ 75.6^ 324.1	
	"	29	+0.4^ 79.5^ 248.5	
11	32	41	+0.4^ 79.5^ 328.0	

Nov. 6, 1905

11	30	20 [^]	11	29	52	+0.4 [^]	79.0 [^]	248.5
	30	35 [^]		30	7	+0.5 [^]	77.1 [^]	327.5
	30	45 [^]		"	17	+0.7 [^]	71.6 [^]	250.4
	30	55 [^]		"	27	+0.9 [^]	66.9 [^]	322.0
	31	7 [^]		"	39	+1.0 [^]	64.5 [^]	255.1
	31	14 [^]		"	46	+1.2 [^]	60.3 [^]	319.6
	31	22 [^]		"	54	+1.4 [^]	55.7 [^]	259.3
	31	34 [^]	31	6		+1.5 [^]	52.5 [^]	315.0
	31	40 [^]	"	12		+1.7 [^]	49.3 [^]	262.5
	31	50 [^]	"	22		+1.8 [^]	46.3 [^]	311.8
	31	59 [^]	"	31		+2.2 [^]	40.5 [^]	265.5
	32	7 [^]	"	39		+2.4 [^]	35.9 [^]	306.0
	32	15 [^]	"	47		+2.9 [^]	28.9 [^]	270.1
	32	23 [^]	"	55				299.0
11	32	39 [^]	11	32	11	Not seen later		

Limit of vis.

11	33	5	32	43	22.3	276.7
		+28	33	2	22.9	299.0
11	33	33	"	10	45.2	276.0
			"	24	+3.5	22.6
						298.9

Seeing a little blurry. Sat. rather near
Jup. These circumstances caused settings
to be made rather slowly as the Sat. grew
faint; had it been otherwise one or two

Nov. 6. 1905.

more settings could have been obtained at the end of eclipse. Clouds from storm cleared off during evening. Low barometer quite rapidly rising. Altitude also pretty high.

B. & b. 1182

11	39	30.5
11	40	30.5

B. 394

11	40	0.0
11	41	0.0

∴ From 10^h 59^m 10^s to 11^h 4^m 13^s add 22 sec.

"	11	4	13.	"	11	9	15.	"	23	"
"	11	9	15.	"	11	14	12.	"	24	"
"	11	14	12.	"	11	19	20.	"	25	"
"	11	19	20.	"	11	24	23.	"	26	"
"	11	24	23.	"	11	29	25.	"	27	"
"	11	29	25.	"	11	34	22.	"	28	"
"	11	34	26.	"	11	39	30.	"	29	"

Nov. 8, 1905 (Wednesday)

183936

4th Type Stars +36° 32' 43" Photo 3 W. Ok. Boni Rec.
Full aperture used

18 40 +37.4
23 45
5 5 Index R & B

151.0 4th type stars.

229.0

340.3

37.9

78.0'

57.6'

135.6 - 0.86'

A

161.5

216.6

333.5

46.4

55.1' - 0.94'

72.9'

128.0' - 1.02'

Index L & A.

64.2

133.3

250.0

305.7

69.1'

55.7'

124.8' - 1.09'

B

72.4

-1.08'

125.6

53.2'

242.0

72.0'

314.0

125.2' - 1.08'

Mean -1.01'

8 38 0

8 48 20

86 20

8 43 10

5 +22

13 43 32

Nov. 8, 1905

S.I. 0 24
 H.A. + 5 44
 Dec. + 37.1
 P.A. 56.0 var. B
 Sprocket. + 0.5 B
 " + 1.5 b

4th Type Stars + 9° 4369 Photo Th. Ok. Same Rec.

19	44	+ 8.5
24	38	
<hr/>		
4	54	

For measurements see fol. page.

Nov. 8, 1905

Index L & B

9 28 5

236.3 4th type dis.

318.8 82.5

69.5 59.4

128.9 141.9 -0.74

B

248.8

-0.75

307.6

58.8

59.4

81.7

141.1

140.5 -0.76

Index R & A

148.3

228.4

80.1

341.8

55.1

36.9

135.2 -0.87

A

160.7

-0.91

217.8

57.1

331.6

74.5

46.1

131.6 -0.95

Mean -0.83

9 37 10

65 15

9 32 38

5 +22

14 33 0

S. J. 1^h 10^mD. A. +5^h 15

Dec. +9.5

P. A. 28 5.7 Var B

Sprockets - 0.5 B

" +0.5 B

Nov. 8, 1905. (7152)

U. Unipetulae Phot. J. H. O. Bowie Res.

20	31	+26.0	Old Comp. Set, as in
25	16		previous measurements, used = +24° 43' 06" (A.7)
4	45		Index L & B

153.8 var. dis. Full aperture

224.4

323.3

52.6

70.6'	
89.3'	
159.9'	- 0.38' B

142.4

234.0

333.3

44.9

91.6'	
71.6'	
163.2'	- 0.32'

- 0.35'

Index R & A

60.8

135.5

229.5

328.5

74.7'	
98.7'	
173.4'	- 0.13' A

50.2

- 0.10'

147.8

239.3

318.2

97.6'	
78.9'	
176.5'	- 0.06'

Mean - 0.22'

10	10	20
	11	50
10	5	55
5		+22
15	6	17

Nov 8 1905
Same (old) Comp. Star used, as in previous group on p. 97.

Index Red

9.5 cap.

10 28 57

239.0

321.1

52.7

148.3

82.1

95.6

177.7

-0.04

A

231.9

327.8

60.8

138.5

95.9

78.0

173.9

-0.11

-0.08

Index L & B

151.2

223.9

322.5

54.3

72.7

91.8

164.5

-0.29

B

144.4

233.7

333.7

45.8

89.3

72.1

161.4

-0.35

-0.32

Mean -0.20

10 39 8
67 65
10 33 62
5 +22
15 34 24

Nov. 8, 1905
 New Comp. Star used = $+26^{\circ} 39' 36''$ (9.1)
 Full aperture.

Index 200 This New Comp. Star abandoned.
 148.2 var. dis.

11 9 52

226.7

78.5

338.2

64.2

42.4

142.7 - 0.72

A

156.9

-0.69

222.6

65.7

327.7

80.0

47.7

145.7 - 0.66

Index 200

57.4

142.4

85.0

243.5

67.3

310.8

152.3 - 0.53

B

65.5

11 17 52

132.2

66.7

-0.52

26 104

235.0

86.4

11 13 52

321.4

153.1 - 0.51

5 +22

16 14 14

S.B. 2nd 50^m

Mean - 0.60

H.A. + 6 17

Dec + 26.8

P.A. 141.0th B

It's watch used for times
 Hatch 22 sec. slow

Sp. 141.0th B

+ 0.5 B

Nov. 9, 1905. (Thursday)

New Comp. Star (+29° 160' 95") compared with old Comp. Star (+79° 15' 93")
79. 1905 (Prone. Karaskie Bar) Photo. 3. Lt. Ok. Bowler

28	34
22	44
5	50
6	10

+ 81.0

Index Left

52.0

Old comp. star dis

B

145.5

93.5

242.3

74.5

316.8

168.0 + 0.23

62.6

134.8

232.0

326.6

72.2

94.6

166.8 + 0.25

+ 0.24

Index Right

323.2

54.9

153.4

223.3

91.7

69.9

161.6 + 0.35

A

334.5

50.1

143.1

234.6

75.6

91.5

167.1 + 0.27

+ 0.30

7 41 2

7 71 20

7 35 40

5 +10

12 35 50

mean + 0.27

Hence, from the ~~mean~~ mean of obs. on Nov. 8 and 9, 1905, the New Comp. Star is 0.24 ^{mag.} ft. than the old. Consequently all the obs. of Nov. 79, 1905, up. to Nov. 2, 1905, incl. have been altered by 0.24 mag. to reduce to new Comp. Star system. Hereafter, only star C. S. used.

Nov. 9, 1905.

S.J. 23^h 28^m
 L.A. -5 16
 Dec +79.8
 P.A. 228.5 Ver B
 Sprockets -5.5 B
 " -4.5 b

Fourth Type Stars $+61^\circ$ 667 Phot. J.H. Oke, Browne^{Rec}
 27 30 62.7
 24 00

 3 30
 8 30

Full aperture used

For measurements see fol. page

Nov. 9, 1905.

Index Above

8 47 35

71.5	4th type star dis.	
127.5	56.0'	
240.2	<u>76.1'</u>	
316.3	132.1'	-0.94' A

62.0		-0.98'
135.3	73.3'	
252.9	<u>54.8'</u>	
367.7	128.1'	-1.02'

Index Below

343.2		
35.7	53.5'	
152.4	<u>73.1'</u>	
225.5	125.6'	-1.07' B

332.2		-1.10'
-------	--	--------

8	54	0	
8	101	35	
5	50	48	
		+10	
13	50	58	

45.8	73.6'	
164.3	<u>49.6'</u>	
213.9	123.2'	-1.12'

S.I. 0^h 30^m

H.A. -3 28

Dec. +61.1

P.A. 185.0 Var. B

Sprockets -4.5 A

" -3.5 B

" -3.0 C

Mean -1.04'

Nov. 9, 1905.

Comp. with new b.s. selected tonight

U Vulpeculae Photo. 3 H. Obs. Bowie Rec.

20	31	+26.0 new Comp. Star = +25° 43' 01" (A.A)
24	35	This Comp. Star to be the 9.5 bap used
4	4	Index L & A final one adopted.

236.4 var. dis

321.2

48.6

150.1

84.8

101.5

186.3

173.7

+0.12

B

229.5

330.6

55.1

140.8

Index R & B

147.8

230.2

318.8

58.5

101.1

85.7

186.8

173.2

+0.12

+0.13

A

82.4

99.7

182.1

177.9

+0.04

139.3

238.5

330.6

49.0

99.2

78.4

177.6

-0.02

-0.05

+0.06

9 42 3

76 20

38 10

+10

14 38 20

Nov 9, 1905
 $+25^{\circ} 43' 06''$ (A.7)
 Old Comp. Star compared with new b. s. selected tonight
 Index R & A

319.0
~~60.3~~ ← new start 9.5 hrp used

Comp. Star (New) = $+25^{\circ} 43' 01''$ (A.7)

138.7 ← Old comp. star dis.

241.1 102.4

327.5 81.5

49.0 183.9

176.1 +0.07

A

146.7

230.9

314.6

61.6

84.2

+0.14

107.0

191.2

168.8

+0.21

Index L & B

43.8

151.0

232.9

324.3

107.2

91.4

198.6

161.4

+0.35

B

53.0

144.4

224.2

333.5

91.4

+0.37

109.3

200.7

159.3

+0.39

Mean +0.26

∴ Old Comp. Star (which is suspected of variability) is the fr. to right. and is 0.26 mag. fr. than the New Comp. Star.

10 5 35
 19 62 73
 9 61 36
 5 +10
 15 1 46

Nov. 9, 1905.

S. J. 1^h 51^m

L. A. +5 17

Dec. +26.1

P. A. 110.5 Ver B

Sprockets -3.5 B

" -2.5 b

Fourth Type Stars +40° 4210 (9.4) Photo 3 H. Ok Bouri^{Rec}

20	17	+ 39.8
26	00	
5	43	

For measurements see fol. page

Nov. 9, 1905.

Index L & B

10 55 30

154.6

223.1 ← comp star dis.

329.2

49.6

68.5'

80.4'

148.9' + 0.60'

146.0

231.0

333.2

41.6

85.0'

68.4'

153.4' + 0.51'

Index R & A

* 244.6

311.8

54.6

136.3

67.2'

81.7'

148.9' + 0.60'

234.9

323.9

65.4

130.7

89.0'

65.3'

154.3' + 0.49'

11 3 35

21 58 65

10 59 32

5 + 10

15 59 42

L.V.

mean + 0.55'

The above object was doubted at the time. It is undoubtedly an observation of some other star than 4210. and probably gave trouble from bad atmospheric conditions.

Nov. 9, 1905.

S.I. 2^h 37^m
 Lat. + 6 10
 Dec. +40.3
 P.A. 26 7.6 Ver. B
 Sprockets + 0.5 B
 " + 1.5 B

It's watch used for times tonight
 Watch 10 sec. slow

Nov. 10, 1905. (Friday)

Fourth Type Star $-16^{\circ} 52' 72''$ (6.8) Photo. 3 & Obs. Bowie, ^{Per}

19 13 -16.2
 $\frac{22}{3}$ $\frac{46}{33}$

Index Red

156.0 \leftarrow 4th type dis
 221.6 65.6
 344.5 47.0
 31.5 $\frac{112.6}{-1.36}$ A

164.7 -1.34
 213.5 48.8
 336.9 65.7
 42.6 $\frac{114.5}{-1.31}$

Index L & B

61.0
 135.6 74.6
 252.5 54.0
 306.5 $\frac{128.6}{-1.01}$ B

71.8 -1.04
 124.8 53.0
 241.2 72.9
 314.1 $\frac{125.9}{-1.07}$

Mean -1.19

7 49 0
 $\frac{85}{7}$ 56
 42 58
 5 + 7
 $\frac{12}{43}$ 5

Nov. 10, 1905.

S.J. 23^h 32^m
 H. A. + 4 17
 Dec. - 15.7
 P. A. 114.5 Ver B
 Sprockets - 1.5 A
 " - 0.5 B
 " + 0.0 C

Region thoroughly identified before putting phot.
 on and again afterwards. There is no other
 comp. star with which the right one could be
 confounded. Region rather low Moon rather
 bright stars however pretty well seen and obs.
 considered pretty good.

If Unlabeled Phot. J St. Obs. Bowe Rec.
 20 31 + 26.0
 23 45
 3 14

Compared with new S. S. selected last
 night

For measurements see fol. page

Nov. 10, 1905

Var. with New Comp. Stars.

9.5 b ap

Index L & A

8 22 38

331.0 ← comp stars, die
 49.0 78.0
 138.8 99.3
 238.1 177.3 +0.05

B

321.7 +0.06
 59.0 97.3
 148.0 78.4
 226.4 175.7 +0.08

Index R & B

238.0
 319.4 81.4
 46.5 103.1
 149.6 184.5
 175.5 -0.08

A

228.5
 329.1 100.6 -0.06
 59.0 81.0
 140.0 181.6
 178.4 -0.03

8: 32 13
 54 51
 27 26
 5 +7
 13 27 33

P.A. 189.5

Mean 0.00

Nov. 10, 1905
 # Old C. S. with New C. S.

Index L & B

9.5 cap

9 4 32

152.0
 224.8
 323.1
 51.4

New b. S. dis

728.
 88.3

161.1 + 0.36

143.0

+0.36

233.2

332.0

42.5

90.2

70.5

160.7 + 0.37

Index R & A

60.2

140.6

229.4

327.8

80.4

98.4

178.8 + 0.02

49.7

148.8

238.0

319.6

99.1

81.6

180.7

179.3 - 0.01

0.00

9 12 30

16 62

9 8 31

5 +7

14 8 38

S. J. 0

49

B. d. + 4

15

Dec. + 26.1

C. S. 289.8 per B

Sprickets

Mean + 0.18

112

Nov. 10, 1905.
 Old C. S. with New C. S. again.
 Red

9 26 19

60.4	New b. s. obs	9.5 bap
136.7	76.3'	
228.7	97.8'	
326.5	174.1	+0.11' A

48.9		+0.06'
147.5	98.6'	
238.5	81.1'	
319.6	179.7	+0.01'

LLB

333.6		
43.6	70.0'	
142.5	90.5'	
233.0	160.5'	+0.37' B

323.8		+0.40'
52.0	88.2'	
153.5	70.0'	
223.5	158.2'	+0.42'

9 35 25

61 44

9 30 52

5 +7

14 30 59

Mean +0.23'

Nov. 10, 1905.
Var. (V. Vulpes) with new C. S. again.

Index L & R

9.5 bap

9 48 30

140.2 ← new b. s. dis
238.2
331.8
48.3
98.0
76.5
174.5 + 0.10

3

150.3
227.5
319.4
58.6
77.2
99.2
176.4 + 0.07

+ 0.08

Index R & B

47.5
148.5
237.6
319.5
101.0
81.9
182.9
177.1 - 0.05

4

10 0 5

19 48 35
9 54 18
5 + 7

58.5
139.8
228.5
328.9
81.3
100.4
181.7
178.3 - 0.03

- 0.04

14 54 25

S. S. 2 15
H. A. + 5 40
Dec. + 26.2
P. A. 189.5
Sprocket - 0.5 B
" + 0.5 b

Mean + 0.02
Readings on var. with new b. s.

Nov. 10, 1905.

~~4th type star~~ +38° 1539 Phot. 3 St. Alb. Bourc. Res

$$\begin{array}{r}
 6 \quad 27 \quad +38.6 \\
 2 \quad 27 \\
 \hline
 4 \quad 0 \\
 8 \quad 0
 \end{array}$$

Index Q & D

83.1 ← was 4th type dis

114.5

31.4

259.3

39.8

299.1

71.2 - 2.47

78.8

-2.48

117.2

38.4

263.7

32.1

295.8

70.5 - 2.49

Index L & B

355.5

23.0

27.5

171.0

37.6

208.6

65.1 - 2.67

349.5

-2.69

26.4

36.9

176.0

27.2

203.02

64.1 - 2.71

Mean - 2.58

11 3 48

11 10 44

13 84

11 6 72

5 +7

16 7 19

Nov. 10, 1905.

S.J. 2 47
h.A. -3 43
Dec. + 38.0
P.A. 191.5 Ver B
Sprocket - 3.5 B
" - 2.5 b

It's watch used for times tonight
Watch 7 sec slow

Nov. 11, 1905. (Saturday)

Fourth Type Star -16° 5272 Photo J. H. G. B. m. R.

$$\begin{array}{r} 19 \quad 13 \\ 22 \quad 53 \\ \hline 3 \quad 40 \end{array}$$
 Index R & A

7 26 14

155.7
221.6 ← 4th. type dis.

$$\begin{array}{r} 344.7 \\ 31.5 \\ \hline 65.9' \\ 46.8' \\ \hline 112.7' \end{array} \quad -1.36'$$

A

166.2 -1.35'

$$\begin{array}{r} 212.2 \\ 334.8 \\ 42.3 \\ \hline 46.0' \\ 67.5' \\ \hline 113.5' \end{array} \quad -1.34'$$

Index L & B

$$\begin{array}{r} 60.8 \\ 135.4 \\ 251.8 \\ 306.7 \\ \hline 74.6' \\ 54.9' \\ \hline 129.5' \end{array} \quad -0.99'$$

B

70.6 -0.98'

$$\begin{array}{r} 127.7 \\ 241.7 \\ 314.4 \\ \hline 57.1' \\ 72.7' \\ \hline 129.8' \end{array} \quad -0.98'$$

Mean -1.16'

$$\begin{array}{r} 7 \quad 36 \quad 0 \\ \hline 7 \quad 62 \quad 14 \\ 7 \quad 31 \quad 7 \\ 5 \quad \quad +4 \\ \hline 12 \quad 31 \quad 11 \end{array}$$

Nov. 11, 1905.

S.J. 23^h 26^m
 H.A. + 4 13
 Dec. - 15.6
 P.A. 116.0 Var B
 Sprockets - 1.5 A
 " - 0.5 B
 " 0.0 b

~~4th type star~~ +36° 3' 24.3 Phot. J. K. Os. Bonni Rec.

18	40	+37.4
23	40	
5	00	

For measurements see fol. page.

Nov. 11, 1905

Index Lab

65.2 ← 4th. type dis.

8 13 16

~~132.0~~ 1.6

66.4'

252.4

56.0'

308.4

122.4' -1.14" B

70.0

-1.13'

127.0

57.0'

246.6

66.3'

312.9

123.3' -1.12'

Index RLB

333.0

45.2

72.2'

158.4

60.6'

219.0

132.8 -0.92' A

341.5

-0.96'

37.6

56.1'

152.9

72.7'

225.6

128.8' -1.00'

8 21 40

8 34 56

5 17 28

5 +4

13 17 32

23. 0h 7m

Ho. A +5 28

Dec +37.0

P. A. 235.5

2 prockets +0.5 B

" +1.5 B

Mean -1.04'

Nov. 11, 1905.

V Undersculae Photo 5 H. Obs. Bowie Rec.

$$\begin{array}{r} 20 \quad 31 \quad +26.0 \\ 24 \quad 41 \\ \hline 4 \quad 10 \end{array} \quad \begin{array}{l} \text{Compared with New C. V.} = 9.5 \text{ brap} \\ \text{Index L.A.} = +25^\circ 4301 (AA) \end{array}$$

319.5 - comp. Star dis.

9 16 48

$$\begin{array}{r} 57.4 \\ 149.8 \\ 227.4 \end{array} \quad \begin{array}{r} 97.9 \\ 77.6 \\ \hline 175.5 \end{array} \quad +0.08' \quad \text{J}$$

$$\begin{array}{r} 331.1 \\ 47.2 \\ 139.7 \\ 237.8 \end{array} \quad \begin{array}{r} 76.1 \\ 98.1 \\ \hline 174.2 \end{array} \quad +0.10' \quad +0.11'$$

Index R & B

$$\begin{array}{r} 225.4 \\ 332.3 \\ 58.5 \\ 138.5 \end{array} \quad \begin{array}{r} 106.9 \\ 80.0 \\ \hline 186.9 \\ 173.1 \end{array} \quad -0.13' \quad A$$

$$\begin{array}{r} 239.0 \\ 317.9 \\ 47.6 \\ 149.6 \end{array} \quad \begin{array}{r} 78.9 \\ 102.0 \\ \hline 180.9 \\ 179.1 \end{array} \quad -0.08' \quad -0.02'$$

9 27 44

43 92

9 21 76

5 +4

14 22 20

P.A. 189.0 Ver. B

mean +0.01'

Nov. 11, 1905.
Comparison of Old. C.V. for V Vulpec. (+25° 4306(A7))
with New C.V. = +25° 4301 (AA)

9.5 braph used

Index R & A

9 42 47

238.1 New b. S. dis.
317.6 79.5
50.8 95.3
146.1 174.8 +0.10

230.9 +0.09
327.0 96.1
59.4 79.5
138.9 175.6 +0.08

Index L & B

153.6
224.6 71.0
325.8 88.2
54.0 159.2 +0.40

146.0 +0.41

9 52 56
94 103
9 47 52
5 47 +4
14 47 56

233.1 87.1
333.4 71.1
44.5 158.2 +0.42

8.3, 1^h 37^m
Ho. S. +5 4
Dec. +26.3
P.A. 110.5 Vers B
Sprockets - 3.5 B
" - 2.5 b

Mean +0.25

Nov. 11, 1905

4th Type Star +38° 15' 39" Phot. 3 H. Obs. Bowie Rec.
6 27 +38.6 9.5" graph used
$$\begin{array}{r} 1 \\ 4 \\ \hline 5 \\ 7 \end{array} \quad \begin{array}{r} 45 \\ 42 \\ \hline 18 \end{array} \text{ Index Red}$$

83.0 4th type dis.

$$\begin{array}{r} 113.9 \\ 257.9 \\ 300.2 \end{array}$$

$$\begin{array}{r} 30.9' \\ 42.3' \\ \hline 73.2' \end{array} \quad -2.40' \quad A$$

$$\begin{array}{r} 78.4 \\ 119.5 \\ 263.7 \\ 294.7 \end{array}$$

$$\begin{array}{r} 41.1' \\ 31.0' \\ \hline 72.1' \end{array} \quad -2.44'$$

Index L & B

$$\begin{array}{r} 355.6 \\ 23.1 \\ 170.2 \\ 206.2 \end{array}$$

$$\begin{array}{r} 27.5' \\ 36.0' \\ \hline 63.5' \end{array} \quad -2.73' \quad B$$

$$\begin{array}{r} 351.6 \\ 26.2 \\ 174.6 \\ 202.4 \end{array}$$

$$\begin{array}{r} 34.6' \\ 27.8' \\ \hline 62.4' \end{array} \quad -2.77'$$

Mean -2.58

$$\begin{array}{r} 10 \quad 27 \quad 44 \\ \hline 45 \quad 83 \\ 10 \quad 22 \quad 72 \\ 5 \quad \quad \quad +4 \\ \hline 15 \quad 23 \quad 16 \end{array}$$

Nov. 11, 1905.

S.I. 2 15

H.A. -4 15

Dec. +38.0

P.A. 190.8

Sprockets -3.5 B

" -2.5 b

4th. type star +2° 4709 Phot. J. H. Ols. Bowie

23	39	+2.7
26	24	
2	45	

9.5 magn

Nov. 11, 1905.

Index L & A

10 58 44

264.9	4th type rods	
295.1	30.2'	
85.2	27.3'	
112.5	57.5'	-2.96' B

265.2		
293.1	27.9'	-2.95'
85.0	30.0'	
115.0	57.9'	-2.94'

Index R & B

175.6		
203.0	27.4'	
358.3	21.2'	
19.5	48.6'	-3.33' A

178.3		-3.36'
-------	--	--------

Rec
re

11	6	20
21	64	64
10	62	32
5		+4
16	2	36

200.2	21.9'	
355.9	25.8'	
21.7	47.7'	-3.38'

mean -3.16'

L. J. 2^h 50^m
 B. A. + 3 8
 Dec. + 2.9
 P. A. 168.5 ver. B
 sprocket - 9.5 d
 " - 8.5 B
 " - 8.0 b

It's watch used for times
 Hatch 4 sec slow

Nov. 14, 1905. (Tuesday)

B 46 1182

b	29	48.5
b	30	48.4

B 394

b	30	0.0
b	31	0.0

Dis. Jup. II Phot. R. M. Obs. Bowie Rec.
comp. with nearer and more northern of
two Sats. on fol. side = Sat. III The
Sat. used is nearly on fol. side is nearly
twice as near Jup. as ~~the other~~ one and
seems a little ~~the~~ brighter

Measurements on fol. pages

Nov. 14, 1905.

6	45	51	^	45	18	67.5^	164.5	
6	46	4	^	"	43	66.4^	232.0	
		+13	^	46	5	133.9^	165.4	1
			^	"	19	+0.9^ 67.0	231.8	
				"	32		165.2	
6	47	3	^	"	48	66.8^	232.0	
6	47	16	^	47	6	69.0^	165.0	2
		+13	^	"	45	135.8^	234.0	2
			^	48	17	+0.9^ 67.9^	162.5	
6	49	1	^	"	55	70.2^	233.0	
6	49	14	^	49	14	69.5^	162.5	3
		+13	^	"	38	139.7^	232.0	
			^	50	3	+0.8^ 69.8^	163.0	
6	50	31	^	"	21	68.9^	231.9	
6	50	44	^	"	43	70.3^	162.2	4
		+13	^	"	58	139.2^	232.5	
			^	51	19	+0.8^ 69.6^	161.5	
6	51	50	^	"	36	72.5^	234.0	
6	52	3	^	52	7	69.2^	163.5	✓
		+13	^	"	19	141.7^	232.7	
			^			+0.7^ 70.8^		
				Refocused slightly. Moved Comp. star slightly				
6	54	41	^	54	9	70.3^	163.5	
6	54	54	^	"	19	68.0^	233.8	6
		+13	^	"	49	138.3^	164.2	
			^			+0.8^ 69.2^		

Nov. 14, 1905.

6	56	42	^	55	26	232.2	6
6	56	55	+13	56	14	163.2	
				"	28	70.3	
				"	56	68.5	
				57	12	138.8	
				"	39	+0.8 69.4	7
				"	58	231.0	
6	58	8	^	"	15	72.8	
6	58	21	+13	58	38	70.8	
				"	56	143.6	
				59	19	+0.7 71.8	8
				"	30	162.2	
				"	48	233.0	
				0	7	70.5	
7	0	37	^	"	36	70.4	
7	0	51	+14	"	48	140.9	
				"	57	+0.8 70.4	9
				1	7	162.8	
				"	25	163.0	
				"	40	67.5	
				"	56	67.7	
				2	11	135.2	10
				"	24	+0.9 67.6	
				"	40	231.7	
				"	56	164.5	
				"	24	62.3	
				"	24	62.2	
				"	24	128.5	11
				"	24	+1.0 64.2	
				"	24	229.2	
				"	24	167.5	
				"	24	62.5	
				"	24	69.3	
				"	24	131.8	
				"	24	+0.9 65.9	

Nov. 14, 1905.

7	3	46 [^] +14 [^]	7	2	44	164.8
7	4	0 [^]	3	12		234.1 ^{k2}
7	4	32 [^]	"	26	66.9 [^]	163.0
4	42 [^]		"	38	65.0 [^]	229.9
4	55 [^]		"	54	131.9 [^] +0.9 [^] 66.0 [^]	167.0 ¹³
5	10 [^]		4	6		232.0 [→]
5	23 [^]		"	18	+1.0 [^] 64.8 [^]	165.1
5	40 [^]		"	28	+1.0 [^] 64.1 [^]	229.9
5	50 [^]		"	41	+1.0 [^] 65.6 [^]	165.8 ²
6	6 [^]		"	56	+1.0 [^] 65.3 [^]	231.4 ²
6	24 [^]		5	9	+1.2 [^] 59.9 [^]	166.1 ²
6	35 [^]		"	26	+1.1 [^] 61.0 [^]	226.0
7	2 [^]		"	36	+1.2 [^] 59.7 [^]	165.0 ²
7	15 [^]		"	52	+1.4 [^] 54.9 [^]	224.7 ²
7	36 [^]		"	+		16 ²
7	8	20 [^]	6	10	+1.5 [^] 54.0 [^]	169.8
			"	21	+1.7 [^] 48.3 [^]	223.8
			"	48	+2.1 [^] 42.5 [^]	175.5
			7	1	+2.2 [^] 40.0 [^]	218.0
			"	22		178.0
			8	6		Not seen later
			Limit of vis.			
7	8	48 [^] +14 [^]	8	18	44.1 [^]	176.9
7	9	2 [^]	"	35	46.0 [^]	221.0
			9	1	90.1 [^]	175.8
			"	19	+1.9 [^] 45.0 [^]	221.8

Nov. 14, 1905.

Seeing very bad. Air cold. Constant
 considered pretty good - as obs. waited for
 intervals of better seeing but as Sat. ap-
 proached Jup. and began to grow faint
 the blurry disk of Jup. would overlap the
 images causing delay and uncertainty
 in the settings, last one or two settings
 rather doubtful

B 26 1182

7	16	45.3
7	17	45.3

B 394

7	17	0.0
7	18	0.0

∴ From 6^h 29^m 20.^s to 6^h 44^m 9.^s add 12. sec.
 " 6 44 9. " 6 52 52. " 13. "
 " 6 52 52. " 7 13 47. " 14. "

Nov. 14, 1905.

E Airage Photo. 3 H. Obs. Bowie Rec.
 25 51 + 43.6 7" graph

23 34
 5 17
 6 43

Index R & A

271.8

287.3

58.5

108.7

268.7

289.7

91.6

105.5

← rate dis

15.5

20.2

35.7

-4.02

-4.04

21.0

13.9

34.9

-4.07

A

Index L & B

182.4

195.6

359.1

17.8

179.8

199.5

2.2

15.1

13.2

18.7

31.9

-4.27

-2.24

19.7

12.9

32.6

-4.22

B

Mean - 4.14

7 54 40

8 4 44

15 58 84

7 59 42

5 0

12 59 42

Nov. 14, 1905

L J. 0 3
 H. A - 4 53
 Dec + 43.3
 P. A 179.5 Ver B
 Sprocket - 8.5 A
 " - 7.5 B
 " - 7.0 b

& Sapher Phot. J H. Ok. Bowe Rec.

23	50	+ 82.4
24	10	
0	20	

9.5 bap

Measurements on fol. page.

Nov. 14, 1905

Index 2A

8 31 47

330.3 ← before dis.

49.4

157.1

220.0

79.1

62.9

142.0' - 0.73'

B

340.0

39.9

148.3

226.8

59.9

78.5

138.4' - 0.81'

- 0.77'

Index 2B

246.1

309.9

56.4

142.5

63.8

86.1

149.9' - 0.58'

A

236.3

319.3

68.2

132.0

83.0

63.8

146.8' - 0.64'

- 0.61'

8 41 18

72 65

8 36 32

5 0

13 36 32

L.J. 0 48

H.A. + 0 51

Dec. + 82.9

P.A. 324.5 Ver.B

Sprockets - 2.5 B

" - 1.5 b

Mean - 0.69'

It's watch used for times

It's watch 0

Nov. 17, 1905 (Friday)

name *beraschi's* Var (See Sear's list No 6) Photo
At Ok Bowie Rec

18 33 + 63.1
23 20
4 47

7 25

cloudy

7 45

"

8 00

"

8 15

"

8 30

Sky still cloudy

9 0

"

"

"

9 35

"

all

"

again no chance for

anything further

Nov. 18, 1905 (Saturday)

Mme. Peraski's Star (See Sear's list, No. 6) Phot. J. H. Oke, Bowie, Pa.

$$\begin{array}{r} 18 \\ 23 \\ \hline 4 \end{array} \quad \begin{array}{r} 40 \\ 13 \\ \hline 33 \end{array}$$

$$+62.6$$

$$\text{comp. star} = +62^{\circ} 16' 39'' (9.3)$$

$$150.0 \text{ comp. star dis.}$$

$$227.0$$

$$322.8$$

$$52.2$$

$$77.0$$

$$89.4$$

$$166.4$$

$$+0.26$$

B

$$142.0$$

$$234.4$$

$$333.0$$

$$44.8$$

$$92.4$$

$$71.8$$

$$164.2$$

$$+0.30$$

$$+0.28$$

Index R & A

$$58.3$$

$$140.0$$

$$230.7$$

$$329.0$$

$$81.7$$

$$98.3$$

$$180.0$$

$$0.00$$

$$49.5$$

$$148.4$$

$$236.6$$

$$319.0$$

$$98.9$$

$$82.4$$

$$181.3$$

$$178.7$$

$$-0.01$$

$$-0.02$$

$$\text{Mean} + 0.14$$

A

$$\begin{array}{r} 8 \\ 15 \\ 7 \\ 5 \\ 12 \end{array} \quad \begin{array}{r} 1 \\ 49 \\ 54 \\ 54 \end{array} \quad \begin{array}{r} 52 \\ 55 \\ 58 \\ +1 \\ 59 \end{array}$$

$$15 \quad 49 \quad 55$$

$$7 \quad 54 \quad 58$$

$$5 \quad +1$$

$$12 \quad 54 \quad 59$$

Nov. 18, 1905.

S. J 0 17

L. A + 5 35

Dec + 63.0

P. A. 275.5 Var B

Sprockets - 2.5 B

" -1.5 b

79. 1905 same beraskis Var.

Phot. J & O. L. Brown Co.

4 34 + 81.0

0 34

 4 00
 8 00

Measurements on fol. page

Nov. 18, 1905.

Index L&A

$$\begin{array}{r}
 8 \quad 47 \quad 27 \\
 324.9 \leftarrow \text{comp star dis} \\
 57.0 \\
 146.2 \\
 227.9 \\
 \hline
 92.1' \\
 81.7' \\
 173.8' + 0.12' \quad B
 \end{array}$$

$$\begin{array}{r}
 329.4 \\
 47.0 \\
 138.8 \\
 237.3 \\
 \hline
 77.6' \\
 98.5' \\
 176.1' + 0.07'
 \end{array}$$

Index R&B

$$\begin{array}{r}
 229.9 \\
 3229.6 \\
 58.1 \\
 140.1 \\
 \hline
 99.7' \\
 82.0' \\
 181.7' \\
 178.3' - 0.03' \quad A
 \end{array}$$

$$\begin{array}{r}
 238.4 \\
 318.5 \\
 \hline
 80.1' \\
 99.2' \\
 179.3' - 0.01'
 \end{array}$$

$$\begin{array}{r}
 8 \quad 58 \quad 14 \\
 \hline
 8 \quad 105 \quad 41 \\
 5 \quad 52 \quad 50 \\
 \hline
 5 \quad \quad +1 \\
 13 \quad 52 \quad 51
 \end{array}$$

$$\begin{array}{r}
 49.0 \\
 148.82 \\
 \hline
 99.2' \\
 179.3' + 0.01' \\
 \text{Mean} + 0.05'
 \end{array}$$

Nov. 18, 1905.

Index R4B

9 19 36

232.0

323.7

59.5

140.1

91.7'

80.6'

172.3'

+0.14'

A

240.0

318.1

49.5

148.4

78.1'

98.9'

177.0'

+0.06'

+ 0.10'

Index Led

138.2

236.5

331.0

47.5

98.3'

76.5'

174.8'

+0.10'

B

150.0

225.5

321.2

57.5

75.5'

96.3'

171.8'

+0.16'

+0.13'

Mean +0.12'

9 29 3

9 48 39

9 24 20

5 21

14 24 21

L.J. 1^h 43^m

H. A. -3 7

Dec. +79.9

P. A. 8.0 Ver B

Sprockets - 1.5 A

" - 0.5 B

" 0.0 b

Nov. 18, 1905.

9.5 hr.

V. Vulpeculae Photo J H. Oke Bowie Rec.

20	31	+ 26.0
25	55	
5	24	

New C. S. used.

Index L & A

138.5 ← group star dis

236.8 8.0

328.0

52.4

99.5'

84.4'

183.9'

176.1' - 0.07'

B

146.2

232.7

318.2

57.8

86.5'

-0.09'

99.6'

186.1'

173.9' - 0.11'

Index R & B

48.4

153.0

238.2

320.5

104.6'

82.3'

186.9'

173.1' - 0.13'

A

57.3

140.6

229.7

328.6

83.3'

-0.08'

98.9'

182.2'

177.8' - 0.04'

10 10 0

10 11 25'

10 5 42'

5 + 1'

15 5 43'

P. A. 188.5 ver B

Mean - 0.08'

Nov. 18, 1905
New Comp. Star compared with old Comp. Star,
(for V Vulpec.)

Index R & A

9"5 bap

10 29 2

240.7 New b. S. dis

314.7

74.0

52.4

94.1

146.5

168.1 + 0.22'

A

231.0

+ 0.20'

327.6

96.6

62.0

74.5

136.5 + 41.0

171.1 + 0.17'

Index L & B

153.4

227.7

74.3

323.9

89.8

53.7

164.1 + 0.30'

B

10 39 6

144.6

+ 0.34'

232.1

87.5

332.1

71.9

10 68 8

44.0

159.4 + 0.39'

10 34 4

5 +1

Rd C.S. = mean + 0.27'

15 34 5

2.3, 2^h 53^m

b. d. + 6 20

Dec. + 26.3

P.A. 110.0 Ver. B

Shocks - 3.5 B

" - 2.5 b

It's watch used for times
Watch 1 sec. slow

Nov. 20, 1905 (Monday)

Mme. barack's Var (See Seares bird no. 6) Photo J & O. K. Bowie ^{Rec.}
 18 40 + 62.6 Full aperture.

23 35
 4 55

Index L & B

46.7 44.3 var. dis.

151.0

104.3'

235.0

86.6'

321.6

190.9'

169.1'

+0.20'

B

54.9

141.3

86.4'

+0.22'

224.0

107.0'

331.0

193.4'

166.6'

+0.25'

Index R & A

317.3

58.8

101.5'

149.6

80.9'

230.5

182.4'

177.6'

+0.05'

A

328.0

48.9

80.9'

+0.04'

138.5

101.4'

239.9

182.3'

177.7'

+0.04'

Dream +0.13'

7 49 4

7 58 2

107 6

7 53 33

5 -7

12 53 26

Nov. 20, 1905

S.J. 0 20

Jb. A + 5 40

Dec + 63.0

P.A. 275.6 Var B

Sprockets - 2.5 B

" - 1.5 b

035727 Hewittgol Var. Photo. 3 H. Obs. Bowie Rec

3 58 + 28.6

0	25
3	33

Measurements of fol fages

Nov. 20, 1905.

Index LXB

8 24 4

345.8 *var dis*

33.5 47.7'

170.7 35.4'

206.1 83.1' -2.10'

I

B

350.3

-2.03'

27.8 37.5'

163.0 50.8'

213.8 88.3' -1.96'

Index Red

253.0

307.4 54.4'

79.7 38.8'

118.5 93.2' -1.83'

A

259.0

-1.82'

298.6

39.6'

71.3

54.7'

126.0

94.3' -1.80'

Mean -1.92'

8 35 10

8 59 14'

8 29 37'

5 -7'

13 29 30'

Nov 20 1905

Index R & A

Same again

8 51 2

250.7

307.0

77.4

119.4

56.3'

42.0'

98.3'

-1.70'

II

A

258.0

300.7

71.2

127.0

42.7'

55.8'

98.5'

-1.69'

-1.70'

Index L & B

169.4

209.3

340.0

33.5

39.9'

53.5'

93.4'

-1.82'

B

162.4

215.4

346.4

27.6

53.0'

41.2'

94.2'

-1.80'

-1.81'

Mean - 1.76'

9	3	54
17	54	56'
8	57	28'
5		-7'
13	57	21'

Nov. 20, 1905.

Index L & B

9	22	4	342.0			III
			34.4	52.4'		
			168.4	<u>42.4'</u>		
			210.8	94.8'	-1.79'	B

9	24	12	347.3			-1.72'
			30.5	43.2'		
			160.0	<u>56.8'</u>		
			216.8	100.0'	-1.66'	

Index R & A

9	29	15	247.3			A
			308.9	61.6'		
			74.8	<u>47.2'</u>		
			122.0	108.8'	-1.45'	

9	31	30	255.3			-1.43'
			303.3	48.0'		
			67.8	<u>62.4'</u>		
			130.2	110.4'	-1.41'	

9	106	61
9	26	45
5		-7
14	26	38

Mean -1.58'

Nov 20 1905

Index R & A

IV

9 35 0

$$\begin{array}{r} 247.7 \\ 311.4 \\ 74.3 \\ 123.1 \end{array}$$

$$\begin{array}{r} 63.7' \\ 48.8' \\ \hline 112.5' \end{array} - 1.36'$$

A

9 37 18

$$\begin{array}{r} 254.5 \\ 302.9 \\ 64.6 \\ 130.5 \end{array}$$

$$\begin{array}{r} 48.4' \\ 65.9' \\ \hline 114.3' \end{array} - 1.34'$$

-1.34'

Index L & B

9 40 47

$$\begin{array}{r} 158.8 \\ 220.1 \\ 346.0 \\ 32.0 \end{array}$$

$$\begin{array}{r} 61.3' \\ 46.0' \\ \hline 107.3' \end{array} - 1.48'$$

B

9 42 48

$$\begin{array}{r} 165.5 \\ 211.4 \\ 337.8 \\ 38.3 \end{array}$$

$$\begin{array}{r} 45.9' \\ 60.5' \\ \hline 106.4' \end{array} - 1.50'$$

-1.49'

$$\begin{array}{r} 154 \\ 38 \\ 58 \\ \hline 113' \\ 58' \\ -7' \\ \hline 14 \quad 38 \quad 51' \end{array}$$

$$\text{Mean} - 1.42'$$

Nov. 20, 1905.

Index L & B

 $\frac{V}{B}$

9 47 8

158.0
220.5
345.0
30.3

62.5'
45.3'
107.8' -1.47'

9 49 48

166.3
212.6
337.8
39.4

46.3' -1.47'
61.6'
107.9' -1.47'

Index Red

9 53 30

66.0
132.3
253.8
305.5

66.3'
51.7'
118.0' -1.24' A

9 55 54

72.6
123.4
241.4
316.0

50.8' -1.16'
74.6'
125.4' -1.08'

9 51 35

5 -7

14 51 28

Mean -1.32'

Nov 20 1905

Index R & A

10	10	18	62.5	71.8'	<div style="text-align: right;"> <u>VI</u> A </div>
			134.3	55.5'	
			251.3	127.3'	
			306.8	-1.04'	

10	13	22	70.2	55.8'	<div style="text-align: right;"> -0.98' </div>
			126.0	76.7'	
			241.0	132.5'	
			317.7	-0.93'	

Index L & B

10	17	33	331.3	71.9'	<div style="text-align: right;"> D </div>
			43.2	56.1'	
			159.7	128.0'	
			215.8	-1.02'	

10	20	14	340.3	57.9'	<div style="text-align: right;"> -0.98' </div>
			38.2	73.6'	
10	60	87	151.0	131.5'	
10	15	22	224.6	-0.95'	

5		-7
15	15	15

Mean -0.98'

Nov. 20, 1905.

Index L 4B

VII

10 24 54

331.9
45.6
158.4
218.7

73.7
60.3

134.0 -0.90

⊙

10 28 23

337.5
40.2
150.0
224.7

62.7
74.7

137.4 -0.83

-0.86'

Index R 4A

10 33 5

238.2
318.8
66.7
131.5

80.6
64.8

145.4 -0.67

⊙

10 36 54

245.4
313.3
54.3
143.1

67.9
88.8

156.7 -0.44

-0.56'

10 121 136

10 30 49

5 -7

15 30 42

L.J. 2^h 57^m

H.A. - 1 0

Dec. + 27.2

P.A. 311.5 Ver. B

Sprockets - 1.5 B

" -0.5 b

Means -0.71'

W.A. watch used for times
Watch 7 sec. fast

Nov. 21, 1905 (Tuesday)

79. 1905 *Maia berackis* var. in *lephane* Phot. 3 H. L. G. B. R.

$$\begin{array}{r} 428 \\ 23 \\ \hline 445 \end{array} \quad \begin{array}{r} 34 \\ 45 \\ \hline 79 \end{array} \quad + 81.0$$

$$\begin{array}{r} 4 \\ 7 \\ \hline 11 \end{array} \quad \begin{array}{r} 49 \\ 11 \\ \hline 60 \end{array} \quad \text{Index 24A}$$

$$145.0 \leftarrow \text{comp star dis}$$

$$229.2$$

$$331.4$$

$$45.6$$

$$84.2'$$

$$74.2'$$

$$158.4' + 0.41'$$

I

B

7 44 54

$$151.4$$

$$226.7$$

$$323.3$$

$$54.5$$

$$75.3'$$

$$91.2'$$

$$166.5' + 0.25'$$

$$+ 0.33'$$

Index 24B

$$49.6$$

$$146.1$$

$$240.4$$

$$316.4$$

$$96.5'$$

$$76.0'$$

$$172.5' + 0.14'$$

A

$$59.0$$

$$137.2$$

$$228.8$$

$$328.0$$

$$78.2'$$

$$99.2'$$

$$177.4' + 0.05'$$

$$+ 0.10'$$

$$\begin{array}{r} 7 \\ 55 \\ 35 \\ \hline 99 \end{array} \quad \begin{array}{r} 89 \\ 74 \\ -7 \\ \hline 67 \end{array}$$

$$\begin{array}{r} 7 \\ 49 \\ 74 \\ \hline 12 \end{array} \quad \begin{array}{r} 50 \\ 67 \end{array}$$

$$\begin{array}{r} 7 \\ 49 \\ 74 \\ \hline 12 \end{array} \quad \begin{array}{r} 50 \\ 67 \end{array}$$

$$\begin{array}{r} 7 \\ 49 \\ 74 \\ \hline 12 \end{array} \quad \begin{array}{r} 50 \\ 67 \end{array}$$

$$\begin{array}{r} 7 \\ 49 \\ 74 \\ \hline 12 \end{array} \quad \begin{array}{r} 50 \\ 67 \end{array}$$

$$\text{Mean} + 0.22'$$

Nov. 21, 1905.

Index R & B

Same again

$$\begin{array}{r} 8 \quad 14 \quad 59 \\ \hline 11 \quad 0 \end{array}$$

$$\begin{array}{r} 49.5 \quad 58.7 \\ 148.4 \quad 137.3 \\ 238.5 \quad 228.8 \\ \hline 318.0 \quad 327.8 \end{array}$$

$$\begin{array}{r} 78.6 \\ 99.0 \\ \hline 177.6 \end{array} + 0.05 \quad \begin{array}{l} \text{II} \\ \text{A} \end{array}$$

$$\begin{array}{r} 48.8 \\ 148.6 \\ 241.4 \\ \hline 315.4 \end{array}$$

$$\begin{array}{r} 99.8 \\ 74.0 \\ \hline 173.8 \end{array} + 0.08$$

Index Led

$$\begin{array}{r} 332.1 \\ 46.7 \\ 140.6 \\ \hline 236.8 \end{array}$$

$$\begin{array}{r} 74.6 \\ 96.2 \\ \hline 170.8 \end{array} + 0.17 \quad \text{B}$$

$$\begin{array}{r} 320.6 \\ 56.55.8 \\ 150.4 \\ \hline 224.8 \end{array}$$

$$\begin{array}{r} 95.2 \\ 74.4 \\ \hline 169.6 \end{array} + 0.18$$

$$\begin{array}{r} 8 \quad 23 \quad 45 \\ \hline 8 \quad 37 \quad 104 \\ 8 \quad 18 \quad 82 \\ 5 \quad -7 \\ \hline 13 \quad 19 \quad 15 \end{array}$$

Mean + 0.13

Nov. 21, 1905.

Index 22A

328.5

47.7

142.7

235.5

79.2'

92.8'

172.0' + 0.15'

III

⑧

322.3

55.5

150.8

226.2

93.2'

75.4'

168.6' + 0.22'

+ 0.18'

Index 22B

240.8

314.6

50.0

148.3

73.8'

98.3'

172.1' + 0.15'

⑨

231.2

328.4

61.6

138.0

97.2'

76.4'

173.6' + 0.12'

+ 0.14'

8 40 36

8 71 70'

5 35 65'

5 -7'

-13 35 58

mean + 0.16

Nov. 21, 1905.

Index R & B

IV

8 43 2.5

241.5

317.4

48.5

147.5

75.9'

99.0'

174.9'

+0.09'

A

230.5

327.5

62.4

138.40

97.0'

75.6'

172.6'

+0.12'

+0.14'

Index L & A

151.8

226.9

321.7

57.7

75.1'

96.0'

171.1'

+0.17'

B

141.0

237.0

332.8

46.2

96.0'

73.4'

169.4'

+0.18'

+0.20'

8 52 46

8 95 71'

8 47 66'

5 -7'

13 47 59

S.J. 1^h 15^m

H.A. -3 35

Dec +79.8

P.A. 8.5 Ver. B

Sprockets -1.5 A

" -0.5 B

" 0.0 b

Mean +0.15'

Nov. 21, 1905.

Dis. II Phot. R H. Obs. Bowie Rec.
 Comp. with nearest of three Sats. on fol.
 side = Sat. III. Two of the Sats. on
 fol. side are somewhat near the planet the
 northernmost and one nearest the planet being
 the Comp. Sat.

B & b 1182

9	12	31.2
9	+3	<hr/>
9	14	31.0

B 394

9	13	0.0
9	+4	<hr/>
9	15	0.0

9	25	59	^
		+30	^
9	26	29	^

9	27	28	^
		+30	^
9	27	58	^

25	34
"	44
26	3
	<hr/>
"	36
27	2
"	20

68.4	164.9
68.0	233.3
<hr/>	163.0
136.4	
+0.5	23
68.2	231.0
	<hr/>
71.6	160.4
71.0	232.0
<hr/>	
142.6	
+0.7	71.3

Nov. 21, 1905.

9	28	21	^	27	38	16.3.0	
		+30	^	"	52	234.0	2
9	28	51	^	28	2	164.2	
				"	14	68.6^	
				"	28	69.5^	
				"	40	138.7^	3
				"	56	+0.8^ 69.2^	
9	29	20	^	29	12	69.9^	
		+31	^	"	30	71.1^	
9	29	51	^	"	43	141.0^	4
				"	30	+0.8^ 70.5^	
				"	19		
9	30	41	^	30	30	67.8^	
		+31	^	"	47	68.2^	
9	31	12	^	31	9	136.0^	5
				"	21	+0.9^ 68.0^	
				"	31		
9	31	45	^	"	48	69.3^	
		+31	^	"	19	70.5^	
9	32	16	^	32	39	139.8^	6
				"	52	+0.8^ 69.9^	
				"	13		
9	33	5	^	33	36	71.0^	
		+31	^	"	20	70.5^	
9	33	36	^	34	32	141.5^	7
				"	47	+0.7^ 70.8^	
				"	7		
9	34	42	^	35		69.8^	
		+31	^			68.0^	
9	35	13	^			137.8^	8
						+0.8^ 68.9^	

Nov. 21, 1905.

9	36	5	9	35	38	71.0 [^]	163.0	
		+31 [^]		"	56	70.4 [^]	234.0	
9	36	36		36	14	141.4 [^]	163.1	9
				"	33	+0.7 [^] 70.7 [^]	233.5	
9	37	34		37	12	73.0 [^]	162.0	
		+31 [^]		"	28	69.2 [^]	235.0	
9	38	5		"	41	142.2 [^]	161.8	10
				"	57	+0.7 [^] 71.1 [^]	231.0	
9	38	26		38	9	70.4 [^]	162.4	
		+32 [^]		"	22	64.0 [^]	232.8	
9	38	58		"	32	134.4 [^]	166.0	11
				"	43	+0.9 [^] 67.2 [^]	230.0	
9	39	33		39	1	+0.8 [^] 69.7 [^]	164.0	→
				"	12		234.5	
39	51			"	19	+0.7 [^] 70.9 [^]	233.7	
40	1			"	29	+1.0 [^] 65.0 [^]	162.8	
40	13			"	41	+1.1 [^] 61.9 [^]	227.8	
40	23			"	51	+1.1 [^] 63.3 [^]	165.9	
40	49			40	17	+1.2 [^] 60.7 [^]	229.2	
41	10			"	38	+1.2 [^] 59.0 [^]	168.5	
41	21			"	49	+1.2 [^] 59.0 [^]	227.5	
41	39			41	7	+1.4 [^] 54.5 [^]	168.5	
41	49			"	17	+1.5 [^] 52.9 [^]	223.0	
42	8			"	36	+1.6 [^] 50.4 [^]	170.1	
42	21			"	49		220.5	
9	42	38	9	42	6			not seen later

Nov. 21, 1905.

Limit of Vis.

9	42	52 [^]	30	55.5 [^]	169.5
9	42	52 [^]	"	52.1 [^]	225.0
		+32 [^]	"	107.6 [^]	170.4
9	43	24 [^]	43	+1.5 [^]	53.8 [^]
					222.5

The eclipse not considered of much value
 The seeing is somewhat blurry and Sat.
 dis. on limb of Jup. making obs. towards
 the last very dif. and uncertain

B. 46. 1182

9	51	27.1
9	52	27.1

B. 394

9	52	0.0
9	53	0.0

∴ From 9^h 19^m 15^s to 9^h 22^m 43^s add 30 sec.
 " 9 22 43. " 9 32 12. " 31 "
 " 9 32 12. " 9 47 40. " 32 "

Nov 21 1905

$$\begin{array}{r}
 2 \quad 40 \\
 \text{Dec.} + 52.3 \\
 \hline
 26 \quad 27 \\
 23 \quad 47
 \end{array}$$

$$\begin{array}{r}
 27 \quad 0 \\
 + 51.8 \quad 52.3 \\
 \hline
 \text{S.J.} \quad 3. \quad 47
 \end{array}$$

$$\begin{array}{r}
 51.8 \\
 3^h \quad 2^m
 \end{array}$$

$$\begin{array}{r}
 27^h \quad 2^m \quad + 51.8 = \text{Dec.} \\
 3^h \quad 4^m \\
 \hline
 26 \quad 4^m \\
 23 \quad 46 = \text{R.A.}
 \end{array}$$

Nov 21, 1905.

Measurements of height of nucleus of comet b-1905
(Schaer) Phot. T. H. obs. Bowie rec.

10 54 $\left. \begin{array}{l} 253.1 \\ 301.3 \\ 79.5 \\ 146.9 \end{array} \right\} \begin{array}{l} \text{Trial settings, abandoned} \\ \text{for new and better start.} \end{array}$

Index Lx A S.L. = +51° 37' 26" (9.0)

257.3 ← comp. star dis.

~~258~~ 300.3

74.0

124.0

43.0

50.0

93.0 + 1.83

B

252.8

302.8

77.0

120.8

50.0

43.8

93.8 + 1.81

Index RxB

170.5

206.8

347.0

29.4

36.3

42.4

78.7 + 2.23

A

167.1

211.5

351.2

27.0

44.4

35.8

80.2 + 2.19

+ 2.21

11 24 18

41 18

11 20 39

5 -7

16 20 32

Mean + 2.02

Watch used for times

Watch 7 sec fast

(See next page)

Nov. 21, 1905.

The group on comet on prec. page
is as said before, a measurement of
the light of the nucleus proper. The
surrounding nebulosity is thin and
rather faint ~~com~~ in comparison with
the nucleus, and the nucleus itself
is somewhat stellar.

Nov. 23, 1905. (Thursday)

03 57 27 New Algol Var

Phot. J. H. Als Bowie Obs.

27.8 58 + 28.6

21 33

6 25

5 35

Index Left

227.3 ← comp. Star dis.

330.0 329.7

61.0

102.7

136.4

75.4

174.1 + 0.03

237.7

20.6

318.3

+ 0.06

52.4

98.6

147.0

175.2 + 0.09

Index Right

149.0

21.0

230.0

339.2

60.0

39.2

141.0

+ 0.75

160.0

+ 0.91

215.5

55.5

+ 1.07

335.0

70.3

+ 0.107

45.3

125.8

Mean + 0.14

Troubled in above group, by clouds.
Eye stop also gave trouble. Eye stop
adjusted before next group.

5 30 38

5 35 5

5 39 58

5 44 32

148 133

5 37 33

5 -8

10 37 25

7173.4428

Nov. 23, 1905.

Index Right

II

5 51 12

152.5

705.

223.0

347.4

x39.

31.3

$$\frac{118.4}{118.4}$$

+1.32.

d

5 56 14

165.6

464.

212.0

337.9

63.1.

41.0

$$\frac{109.5}{109.5}$$

+1.43.

+132.

Index Left

6 1 30

63.0

701.

133.1

252.6

302.8

$$\frac{50.2}{1203}$$

+1.19.

B

6 5 8

74.8

502.

125.0

245.5

$$\frac{68.5}{118.7}$$

+1.31.

+1.25.

310.0

22	113	64
5	58	31
5		-8
10	58	23

7173.457^u

Mean + 1.32

Nov. 23, 1905.

Index Left

$$\begin{array}{r}
 6 \quad 11 \quad 0 \\
 64.9 \\
 131.0 \\
 257.5 \\
 302.9 \\
 \hline
 661. \\
 45.4 \\
 \hline
 1115. \quad +1.32'
 \end{array}$$

B

$$\begin{array}{r}
 6 \quad 16 \quad 58 \\
 73.9 \\
 123.8 \\
 247.8 \\
 309.2 \\
 \hline
 499. \\
 61.4 \\
 \hline
 1113. \quad +1.39'
 \end{array}$$

Index Right

$$\begin{array}{r}
 6 \quad 20 \quad 33 \\
 340.8 \\
 41.3 \\
 165.4 \\
 208.8 \\
 \hline
 605. \\
 123.4 \\
 \hline
 1039. \quad +1.56'
 \end{array}$$

A

$$\begin{array}{r}
 6 \quad 24 \quad 20 \\
 349.0 \\
 32.4 \\
 159.21 \\
 218.0 \\
 \hline
 434. \\
 56.9 \\
 \hline
 1023. \quad +1.60'
 \end{array}$$

Mean +1.46'

$$\begin{array}{r}
 6 \quad 71 \quad 111 \\
 6 \quad 17 \quad 73 \\
 5 \quad -8 \\
 \hline
 11 \quad 18 \quad 5 \\
 7173.471'
 \end{array}$$

Nov. 23, 1905

Index Right

339.2

40.3

166.6

210.4

349.5

311.3

158.2

218.9

61.1'

43.8'

104.9'

+1.54'

IV

A

+1.57'

41.8'

60.7'

102.5'

+1.60'

Index Left

245.3

311.6

74.0

124.8

66.3'

50.8'

117.1'

+1.26'

B

252.6

303.6 2.9

65.2

134.6

50.3'

69.4'

119.7'

+1.20'

+1.23'

Mean +1.40'

6 31 10

6 35 2

6 39 38

6 42 47

6 147 97

6 36 69

5 -8

11 37 1

7173.484^v

Nov. 23, 1905.

Index Left

$$\begin{array}{r}
 247.0 \\
 311.83 \\
 74.4 \\
 121.4 \\
 \hline
 754.23
 \end{array}
 \begin{array}{r}
 643. \\
 47.0 \\
 \hline
 1113.
 \end{array}
 +1.39$$

V B

$$\begin{array}{r}
 253.7 \\
 304.2 \\
 65.1 \\
 132.0 \\
 \hline
 755.0
 \end{array}
 \begin{array}{r}
 505. \\
 66.9 \\
 \hline
 1171.9
 \end{array}
 +1.32$$

+1.25

Index Right

$$\begin{array}{r}
 158.8 \\
 217.6 \\
 346.4 \\
 30.8 \\
 \hline
 753.6
 \end{array}
 \begin{array}{r}
 52.2 \\
 444. \\
 \hline
 1032.
 \end{array}
 +1.52$$

A

$$\begin{array}{r}
 166.2 \\
 210.4 \\
 338.0 \\
 42.430 \\
 \hline
 757.03
 \end{array}
 \begin{array}{r}
 442. \\
 650. \\
 \hline
 1092.
 \end{array}
 +1.52$$

+1.46

$$\begin{array}{r}
 6 \quad 59 \quad 22 \\
 214 \quad 69 \\
 6 \quad 53 \quad 47 \\
 5 \quad -8 \\
 \hline
 11 \quad 53 \quad 39
 \end{array}$$

$$\begin{array}{r}
 11 \quad 53 \quad 39 \\
 \hline
 7173.496
 \end{array}$$

Mean +1.42

Nov. 23, 1905

Index Right

VI

7 4 2

158.7

219.5 60.2

346.9

30.4

43.5

10 K 3

+1.55

A

165.4

210.1

44.7

+1.55

340.6

40.4

59.2

10 K 5

+1.55

Index Left

7 11 46

64.6

66.1

130.7

251.4

303.4

520.1

11 K 1

+1.23

B

73.4

125.6

522.1

+1.16

243.2

2.3

72.5

314.8

124.7

+1.09

Mean +1.36

7 14 28

37 88

7 9 37

5 -8

12 9 29

7173.507

Nov. 23, 1905.

Index Left

$$\begin{array}{r}
 61.0 \\
 137.0 \\
 247.3 \\
 307.8 \\
 \hline
 60.5 \\
 136.5
 \end{array}
 \begin{array}{r}
 76.0 \\
 60.5 \\
 136.5
 \end{array}
 \begin{array}{r}
 \text{VII} \\
 +0.24
 \end{array}
 \quad \text{B}$$

$$\begin{array}{r}
 68.8 \\
 128.9 \\
 236.0 \\
 322.4 \\
 \hline
 60.1 \\
 26.4 \\
 146.5
 \end{array}
 \begin{array}{r}
 60.1 \\
 26.4 \\
 146.5
 \end{array}
 \begin{array}{r}
 +0.74 \\
 +0.64
 \end{array}$$

Index Right

$$\begin{array}{r}
 328.0 \\
 49.6 \\
 158.2 \\
 217.6 \\
 \hline
 21.6 \\
 59.4 \\
 141.0
 \end{array}
 \begin{array}{r}
 21.6 \\
 59.4 \\
 141.0
 \end{array}
 \begin{array}{r}
 +0.75
 \end{array}
 \quad \text{A}$$

$$\begin{array}{r}
 337.1 \\
 40.9 \\
 144.0 \\
 232.9 \\
 \hline
 63.4 \\
 29.4 \\
 153.2
 \end{array}
 \begin{array}{r}
 63.4 \\
 29.4 \\
 153.2
 \end{array}
 \begin{array}{r}
 +0.63 \\
 +0.51
 \end{array}$$

$$\begin{array}{r}
 7 \\
 5 \\
 12
 \end{array}
 \begin{array}{r}
 30 \\
 25 \\
 25
 \end{array}
 \begin{array}{r}
 48 \\
 174 \\
 44 \\
 -8 \\
 36
 \end{array}$$

$$7173.5/8$$

Mean +0.62

Nov. 23, 1905

Index Right

VIII

7 35 38

325.3

56.4

153.0

224.2

91.1

71.2

162.3 + 0.34

A

7 38 45

331.0

45.9

140.0

237.9

74.9

97.9

172.8 + 0.14

+ 0.24

Index Left

225.1

331.2

57.7

138.5

106.1

80.8

186.9

173.1 - 0.13

B

7 44 49

237.0

322.8

44.5

153.85

85.8

109.0

194.8

165.2 - 0.28

- 0.20

7 159 144

7 39 81

5 - 8

12 40 13

7173.528

Mean + 0.02

Nov. 23, 1905.

Index Left

7 49 18
 221.5
 335.4
 53.0
 143.2

113.9
 90.2
 204.1
 155.9

-0.46

B

7 51 52
 233.0
 324.8
 39.6
 156.2

91.8
 116.6
 208.4
 151.6

-0.50

-0.54

Index Right

7 55 17
 132.0
 246.1
 325.5
 53.6

114.1
 88.1
 202.2
 157.8

-0.42

A

~~146.2~~~~232.8~~

142.2

232.5 3.1

313.1

66.6

90.9

113.5

204.4

155.6 -0.47

-0.44

7 59 18

214 105

7 53 56

5 -8

12 53 48

Mean -0.47

7173.537

Nov 23, 1905

Index Rights

X

8 3 20

130.6

246.2

323.4

55.0

115.6'

91.6'

207.2'

152.8'

-0.52'

A

~~141.2~~~~236.6~~

310.8

67.3

139.4

235.5

116.5'

96.1'

212.6'

147.4'

-0.58'

-0.63'

Index Left

216.3

341.4

46.7

149.1

125.1'

102.4'

227.5'

132.5'

-0.93'

B

226.4

329.1

35.8

161.3

102.7'

125.5'

228.2'

131.8'

-0.94'

-0.94'

8 14 8

8 35 90

8 8 68

5 -8

13 9 0

7173.548'

Mean -0.76'

Nov. 23, 1905.

Index Left

XI

8 20 35

215.1

343.0

45.2

151.9

127.9'

106.7'

234.6'

125.4'

-1.08'

B

8 23 8

223.5

333.4

33.6

164.2

109.9'

130.6'

240.5'

119.5'

-1.14'

-1.20'

Index Right

8 26 21

124.7

252.6

317.6

60.8

127.9'

103.2'

231.1'

128.9'

-1.00'

A

8 28 57

136.8

238.2

306.3

71.7

101.4'

125.4'

226.8'

133.2'

-0.96'

-0.91'

8 97 121

8 24 45

5 -8

13 24 37

Mean - 1.05'

7173.559

Nov. 23, 1905.

XII

Index Right

8 34 40

$$\begin{array}{r} 124.2 \\ 253.3 \end{array} \quad 129.1$$

$$\begin{array}{r} 315.3 \\ 59.5 \end{array} \quad \begin{array}{r} 104.2 \\ 233.3 \end{array}$$

$$126.7' \quad -1.05'$$

8 37 20

$$\begin{array}{r} 135.5 \\ 240.8 \end{array} \quad \begin{array}{r} 105.3 \end{array}$$

-1.06'

$$\begin{array}{r} 305.1 \\ 74.5 \end{array} \quad \begin{array}{r} 129.4 \\ 234.7 \end{array}$$

$$125.3' \quad -1.02'$$

Index Left

8 40 55

$$\begin{array}{r} 209.2 \\ 344.0 \end{array} \quad \begin{array}{r} 5.0 \\ 135.2 \end{array}$$

$$\begin{array}{r} 41.2 \\ 156.3 \end{array} \quad \begin{array}{r} 115.1 \\ 250.9 \end{array}$$

$$109.1' \quad -1.44'$$

8 43 44

$$\begin{array}{r} 220.6 \\ 337.5 \end{array} \quad \begin{array}{r} 116.9 \end{array}$$

-1.46'

$$\begin{array}{r} 30.3 \\ 166.5 \end{array} \quad \begin{array}{r} 136.2 \\ 253.1 \end{array}$$

$$106.9' \quad -1.49'$$

$$\begin{array}{r} 154 \\ 38 \end{array} \quad \begin{array}{r} 159 \\ 70 \\ -8 \end{array}$$

$$\begin{array}{r} 13 \\ 39 \end{array} \quad \begin{array}{r} 2 \end{array}$$

7173.569"

Mean -1.26'

Nov. 23, 1905.

$\Delta 3$ 3 17
 H.A. - 2 40
 Dec. + 32.8
 P.A. 130.6 km B
 Sprocket - 1.5 B
 " - 0.5 b

& Vulpeculae Phot 3 H Obs Bowe Rec
 20 31 + 26.0
 27 25
 + 6 54

Region too low, abandoned

H's watch used for times tonight
 Watch 8 sec fast

Nov. 24, 1905. (Friday)

2 Vulpes 3 H. Obs. Bowe Rec.
 20 31 +26.0
 23 36 New C.S. used 9.5 bap
 + 3 5 Index L & A

7 23 23

59.5 var die

135.0 75.5' B
 228.9 100.0'
 328.9 175.5' - 0.08'

48.7 - 0.09'
 147.5 98.8'
 239.1 75.7'
 314.8 174.5' - 0.10'

Ind R 2 P

334.5 A
 42.6 68.1'
 144.0 90.4'
 234.4 158.5' - 0.41'

323.7 - 0.42'

54.1 + 3.8 90.1'
 156.0 67.8'
 223.8 157.9' - 0.42'

Mean - 0.26

7 35 34
 58 57
 7 29 28
 5 - 8
 12 29 20

Nov. 24, 1905.

Index R & B

Same again
new bomb used

8 3 23

332.8
~~43,042.9~~
 143.8
 235.2

var d_h

70.2
 91.4
 161.6

-0.35

A

324.0

-0.40

52.4

88.4

155.6

67.9

223.5

156.3 -0.45

Index L & A

228.6

328.6

62.5

137.2

100.0

74.7

174.7 -0.10

B

242.1

-0.10

316.9

74.8

48.3

99.4

147.7

174.2 -0.11

8 13 40

8 16 63

8 8 32

5 -8

13 8 24

S. J. 0^h 51^m

H. A. + 4 17

Dec. + 26.4

P. A. 8.5 Ver B

Sprocket -0.5 B

+0.5 b

mean -0.25

Nov. 24, 1905.

79. 1905 Mm. berastis Varinophane Phot. J. H. Oke Bowie R.

28	34	+ 81.0
----	----	--------

24	59
----	----

3	35	Index L & A
---	----	-------------

8	25
---	----

140.3 *comp. star dis*

234.6

94.3

B

blonde

333.5

74.0

47.5

168.3 + 0.22

323.3 ~~148.8~~

+ 0.24

56.4 ~~227.7~~

93.1

151.9

72.5

224.4

165.6 + 0.27

Index R & B

239.3

316.9

77.6

50.4

98.6

149.0

176.2 + 0.07

A

230.4

+ 0.04

327.9

97.5

59.9

81.7

141.6

179.2 + 0.02

Mean + 0.14

Troubled in above group by clouds, sky
hazy throughout and stars at times invisible
Extreme care however exercised

Nov. 24, 1905.

S.I. 1 32
 G.A. - 3 17
 Dec. + 79.8
 P.A. 188.8 Var B
 Sprocket - 1.5 d
 " - 0.5 B
 " - 0.0 b

Doubt. Var. 060521 Phot 5 X Ok Bonnie Rec
 6 6 + 22.5

1 46

 4 20
 7 44

Full aperture used

9 25

clouds

For measurements see fol. page

Nov. 24, 1905

Index Red

9 29 25

	147.2	^{Depth.} Index var die	
	227.5	80.3'	
	338.0	62.4'	
blonde	40.4	142.7'	-0.72' R

	158.0		-0.66'
	220.0	62.0'	
blonde	326.6	86.9'	
	53.5	148.9'	-0.60'

Index L & B

	47.2		
	148.1	100.9'	
	243.9	71.0'	
	314.9	171.9'	-0.15' B

	63.5		-0.18'
--	------	--	--------

9	39	48
	68	73
9	34	36
5		-8
14	34	28

	136.4	72.9'	
	230.6	96.5'	
	327.1	169.4'	-0.20'

Mean -0.42'

S.J. 2^h 16^m

H.A. -3 50

Dec. +21.0

P.A. 207.3 Ver B

Sprocket -3.5 A

" -2.5 B

" -2.0 B

It's watch used
 Skatch 8 sec. fast

Nov. 25, 1905 (Saturday)

79. 1905 *Imm. beraskis* Var *inbiflora* Photo J. H. Oke, *Bowie* ^{Russ}

28 34 + 81.0

23 54

4 40
7 20

Index L & A
321.8 ← b. S. dis

58.0 96.2'

151.8 75.0'

226.8 171.2' + 0.17' B

331.3 + 0.16'

46.0 74.7'

140.2 96.9'

236.8 7.1 171.6' + 0.16'

Index R & B

226.3

330.2 103.9'

59.0 80.2'

139.2 184.1'

175.9' - 0.08' A

239.0

318.97

47.98

153.9 1.0

79.7' - 0.06'

103.2'

182.9'

177.1' - 0.05'

Mean + 0.05'

7 30 53

7 43 43

73 96

7 36 78

5 -13

12 37 5

Nov. 25, 1905.

S.J. 0^h 26^m
 H.A. -4 25
 Dec. +79.8
 P.A. 1.8 7.5 Ver B
 Sprocket -1.5 A
 " -0.5 B
 " 0.0 b

V Vulpeculae Phot. J. H. Oke. Bowie Rec
 20 31 + 26.0

24 31

$\frac{4}{8}$ 0
 $\frac{4}{8}$ 0

9.5" bap used

Measurements on fol. page

Nov. 25, 1905.

Index L & A

8 24 26

242.6	var. dis.	
314.8	72.2	
48.5	99.3	
147.8	171.5	-0.16

230.3 -0.20

327.54	97.1	
63.0	70.1	
133.1	167.2	-0.24

Index R & B

155.0		
222.7	67.7	
321.3	95.7	
57.0	163.4	-0.32

141.0 -0.32

235.2	94.2	
334.5	68.5	
43.0	162.7	-0.33

mean -0.26

8 35 27

8 59 53

8 29 56

5 -13

13 29 43

S.J. 1^h 15^m

Jb. A. +4 43

Dec. +26.4

P.A. 188.4 Ver B

Sprocket -0.5 B

+0.5 b

Nov. 25, 1905.

Mme Bernski's Apr (See Seares bir No. 6) Phot 3 & 4k Bowie

$$\begin{array}{r} 18 \quad 40 \\ 25 \quad 37 \\ \hline 6 \quad 57 \end{array} \quad + 62.6$$

Index 24B

$$\begin{array}{r} 141.2 \\ 232.0 \quad 23 \\ 332.6 \\ 44.0 \end{array} \quad \begin{array}{l} \leftarrow \text{comp. star dis.} \\ 91.1 \\ 71.4 \\ \hline 162.5 \end{array} \quad + 0.33$$

B

$$\begin{array}{r} 152.9 \\ 223.5 \quad 4.0 \\ 323.0 \\ 54.4 \end{array}$$

$$\begin{array}{r} 71.1 \\ 91.4 \\ \hline 162.5 \end{array} \quad + 0.33$$

Index R2A

$$\begin{array}{r} 48.3 \\ 148.0 \\ 239.4 \\ 316.6 \end{array}$$

$$\begin{array}{r} 99.7 \\ 77.2 \\ \hline 176.9 \end{array} \quad + 0.06$$

A

$$\begin{array}{r} 61.3 \\ 136.8 \\ 228.5 \\ 327.6 \end{array}$$

$$\begin{array}{r} 75.5 \\ 99.1 \\ \hline 174.6 \end{array} \quad + 0.10$$

Mean + 0.20

$$9 \quad \begin{array}{r} 18 \\ 13 \end{array} \quad 57$$

$$\begin{array}{r} 9 \quad 29 \quad 05 \\ \hline 9 \quad 47 \quad 62 \\ 9 \quad 23 \quad 61 \\ 5 \quad \quad -13 \\ \hline 14 \quad 23 \quad 48 \end{array}$$

Nov. 25, 1905.

Index R & A

Same again.

9 38 48

52.3
146.7
237.0
321.5

94.4'

84.5'

178.9' + 0.02' A

58.2

0.00'

141.8

83.6'

230.1

97.3'

327.4

180.9'

179.1' - 0.02'

Index L & B

321.4

54.7

153.4

225.0

93.3'

71.6'

164.9' + 0.29' B

332.3

+ 0.28'

46.4

74.1'

142.6

91.4'

234.0

165.5' + 0.27'

9 49 18

87 66

9 43 63

5 -13

14 43 50

S.J. 2^h 25^m

H.A. + 7 47

Dec. + 63.0

P.A. 95.5 Ver B

Sprockets - 2.5 B

" - 1.5 b

Mean + 0.14'

Nov. 25, 1905.

o beti Phot. H H. Obs. Bowie Rec.

2	12	-3.5
2	42	
<hr/>		
+ 0	30	Index L & A

10 22 40

350.5 ← var dis

B

53.4

62.9'

164.8

73.2'

238.0

136.1' - 0.85'

344.8

-0.82"

59.2

74.4'

169.0

65.4'

234.4

139.8' - 0.78'

Index R & B

258.9

324.8

72.6

150.3

65.9'

A

77.7'

143.6' - 0.70'

250.6

-0.70'

330.9

80.3'

80.0

62.8'

142.8

143.1' - 0.71'

Mean - 0.76'

10	31	14
<hr/>		
	53	54
10	26	57
5	-13	
<hr/>		
15	26	44

Nov. 25, 1905.

S. J. 3^{hr} 12^{min}
 H. A. + 0 57
 Dec. - 3.0
 P. A. 327.5 Ver B

W's watch used for times
 Watch 13 sec. fast.

Nov. 27, 1905 (Monday)

Wm. L. Gaskie Var. 79.1905 Phot. 3 H. Ols. Bowie Rec

28	34
23	54
4	40
7	20

+ 81.0

Index L & A

I

161.6 ← bump Star die
214.7
350.0
28.1

53.1
38.1
91.2 + 1.88

7 26 44

169.7

+ 1.86

7 31 48

208.8

343.1

36.6

39.1
53.5
92.6 + 1.84

Index R & B

69.1

7 35 30

129.9

256.0

298.9

60.8

42.9

103.7

+ 1.57

77.2

+ 1.61

7 38 5

119.5

248.6

308.2 6.5

42.3

57.9

100.2

+ 1.65

130	127
32	62
5	-17
12	32
45	

Passana + 1.74

Nov. 27, 1905.

Index R & B

7	45	10	70.0			
			127.0	57.0		II
			258.2	<u>41.0</u>		
			299.2	98.0	+1.71	A

7	49	14	78.8			+1.68
			120.6	41.8		
			250.9	<u>57.9</u>		
			308.8	99.7	+1.66	

Index L & A

7	55	30±	344.3			
	55	30	34.8	50.5		
			169.8	<u>37.2</u>		
			207.0	87.7	+1.98	Q
			350.6			+1.94

7	59	2	28.9	38.3		
	208	56	162.4	<u>51.9</u>		
7	52	14	214.3	90.2	+1.91	
5		-17				
12	51	57				Mean + 1.81

Nov. 27, 1905.

III

Index L & A

344.4

35.4

169.0

207.3

51.0'

38.3'

89.3

+1.93'

B

349.8

29.1

160.3

214.0

39.3'

53.7'

93.0'

+1.88'

+1.83'

Index L & B

250.4

306.4

78.5

118.0

56.0'

39.5'

95.5'

+1.77'

A

258.0

298.7

68.3

127.4

40.7'

59.1'

99.8'

+1.72'

+1.66'

Mean +1.50'

8 5 44

8 10 30

8 14 37

8 18 8

8 47 119

8 11 75

5 -17

13 11 58

Nov. 27, 1905.

Index Q & B

8 30 20
~~29 48~~251.4
~~306.8~~ 4.4
78.6
118.6

53.0'

IV40.0'

93.0'

+1.83'

A

8 35 22

257.2
301.0
70.9
127.1

43.8'

+1.74'

56.2'

100.0'

+1.66'

Index L & A

8 39 10

162.2
215.1
349.2
28.4

52.9'

39.2'

92.1'

+1.86'

B

8 42 28

170.6
208.0
342.8
~~35.2~~ 4.5

37.4'

+1.90'

51.7'

89.1'

+1.94'

8 36 50

5 -17

13 36 33

Mean +1.82'

Nov. 27, 1905.

Index L & A

8 48 8

161.4

215.1

348.5

28.2

53.7

39.7

93.4

V

+1.82

B

8 51 43

169.6

209.1

344.4

35.0

39.5

50.6

90.1

+1.86

+1.91

Index R & B

8 55 25

71.6

128.2

259.3

300.1

56.6

40.8

97.4

+1.72

A

78.4

+1.70

8 59 20

121.0

42.6

213 96

249.0

56.1

8 53 39

305.1

98.7

+1.69

5 -17

13 53 22

Mean +1.78

Nov. 27, 1905

Index R+B

9	7	5	71.3			
			127.5	56.2		<u>VI</u>
			257.7	<u>40.9</u>		
			298.6	97.1	+1.73	A

9	10	52	79.0			+1.73
			120.3	41.3		
			249.9	<u>55.9</u>		
			305.8	97.2	+1.73	

Index L+A

9	16	50	342.9			
			348 5.4	52.5		
			167.5	<u>42.5</u>		
			210.0	95.0	+1.78	D
			348.8		+1.77	

9	21	15	29.1	40.3		
	54	122	161.6	<u>55.4</u>		
9	13	60	217.0	95.7	+1.76	
5		-17				
14	13	43				

Mean +1.75.
 Troubled somewhat by ^{some} cloud and haze
 especially in last half of group

190

Nov. 27, 1905

Index L & A

344.5

VII

9 30 20

351.0

50.5

170.1

37.9

208.0

88.4

+1.96

B

350.7

+1.91

9 34 20

27.9

37.2

160.0

55.0

215.0

92.2

+1.86

Index R & B

249.5

9 41 48

306.2

56.7

80.2

39.3

119.5

96.0

+1.76

A

258.3

+1.80

9 47 8

297.6

39.3

72.5

54.0

126.5

93.3

+1.83

158 96

9 38 24

5 -17

14 38 7

mean +1.86

Much troubled in above group by light cloud and haze. Obs. dif.

Nov. 27, 1905.

Stopped by clouds. Several readings
at end of series not made, as images
drifted during the cloudiness and got out
of field.

It's watch used for times
Sketch 17 sec. fast.

Dec. 1 1905 (Friday)

Same beraskis Var. 79. 1905 Phot. 3 H. Obs. Bowie

28 34 +81.0

24 48

3 46

8 14

Index L & A

324.0, comp. stars dis.

57.2 6.7

150.5

225.2

92.7

74.7

167.4 + 0.24

331.6

49.4

140.5

236.3

77.8

95.8

173.6 + 0.12

Index R & B

228.2

326.5

59.1

139.8

98.3

80.7

179.0 + 0.02

239.0

317.6

48.3

148.6

78.6

100.3

178.9 + 0.02

Mean + 0.10

8 12 44

8 14 74

8 7 37

5 -20

13 7 17

Dec. 1 1905

S.J. 1^h 25^m
 H.A. -3 24
 Dec +79.8
 P.A. 187.5 in B
 Sprockets -1.5 A
 " -0.5 B
 " 0.0 b

V Vulpeculae		Phot. J	H. Obs. B, over Rec.
20	31	+26.0	
25	31		
+ 5	00		9.5 Graph

Measurements on fol. page

Dec. 1, 1905

Index L & A

60.3 ← var. dis.

8 49 35

137.3

77.0

233.6

93.4

327.0

170.4

-0.18

B

51.2

-0.18

145.9

94.7

241.5

76.0

317.5

170.7

-0.17

Index R & B

331.7

46.8

144.3

235.4

75.1

91.1

166.2

-0.26

A

322.3

-0.30

54.2

91.9

154.0

69.5

223.5

161.4

-0.35

9 0 54

17 49 89

8 54 74

5 -20

13 54 54

S.J. 2 5

H. A. + 5 31

Dec + 26.2

P. A. 188.5 var B

Sprocket - 0.5 B

" + 0.5 b

Mean -0.24

Dec. 1, 1905

+20° 160 (9.5)

+79° 157 (9.3)

79.1905 New b. S. comp. with old, Phot. J. H. De Bowe Rec.

28	34
26	10
2	24
9	36

+81.0

Index L & B

235.3

323.5

60.5

135.6

Old b. S. dis

88.2

75.1

163.3 + 0.32

B

241.3

317.1

54.1

142.0

75.8

87.9

163.7 + 0.31

+0.32

Index R & A

146.6

230.9

330.4

44.4

84.3

74.0

158.3 + 0.41

A

152.8

224.0

324.8

53.4

71.2

88.6

159.8 + 0.38

+0.40

9 39 30

65 43

9 32 52

5 -20

14 32 32

Mean + 0.36

Dec. 1, 1905.

S.J. 2^h 44^m
 H.A. - 2 2
 Dec. + 79.8
 P.A. 227.8 Var B
 Sprockets - 5.5 B
 " - 4.5 B

Doubt. Var. 060521 Phot. 3 Hoks. Bone Rec
 6 6 + 22.5
~~82~~ 56
~~84~~ 10
~~88~~ 50

Full aperture used

Measurements on fol. page.

Dec. 1, 1905

Index R & A

10 12 5

328.3 ← doubt. var. dis.

49.2

156.7

218.6

80.9

61.9

142.8 - 0.72

A

338.0

41.7

144.3

227.7

63.7

83.4

147.1 - 0.63

-0.68

Index L & B

233.3

324.8

63.6

131.5

91.5

67.9

159.4 - 0.39

B

244.4

313.8

50.7

145.9

69.4

95.2

164.6 - 0.29

-0.34

10 20 28

32 33

10 16 16

5 - 20

15 15 56

S.I. 3 23

H.A. - 2 43

Dec. + 21.0

P.A. 208.5 var. B

Sprockets - 3.5 A

- 2.5 B

- 2.0 C

Mean - 0.51

It's watch used for times.

Watch 20 sec. fast

Dec. 5, 1905 (Tuesday)

U Vulpeculae Photo 3 H. Obs Bowie Rec.
 20 31 + 26.0 9.5 bap

24 31
 4 0

Index L & A

61.2 var. dis.

7 24 4

134.9

73.7

B

227.9

99.9

327.8

173.6

-0.12

49.9

-0.11

146.2

96.3

238.3

78.5

316.8

174.8

-0.10

Index R & B

333.6

41.8

68.2

A

141.0

96.6

237.6

164.8

-0.29

321.5

-0.30

541.5

93.0

152.9

71.1

224.0

164.1

-0.30

Mean -0.20

7 33 28
 57 32
 7 28 46
 5 -28
 12 28 18

Dec. 5, 1905.

S.T. 0. 54
 H.A. + 4 20
 Dec. + 26.3
 P.A. 188.5 Ver B
 Sprocket - 0.5 B
 " + 0.5 B

4th Type
 Double Star + 40° 42' 10" Phot. 3 H. Obs. Bowie Dec.
 20 17 + 39.8
 25 17
 5 0

For measurements see fol. page.

200

Dec. 5, 1905.

Index L & R

46.4 ← 4th type dia.

149.2

237.1

317.9

102.8

80.8

183.6

176.4

+ 0.07

B

57.5

139.3

229.4

325.6

81.8

96.2

178.0

- 0.04

+ 0.02

Index R & B

318.1

57.2

148.9

229.3

99.1

80.4

179.5

- 0.01

A

326.3

50.0

134.9

238.6

83.7

103.7

187.4

172.6

+ 0.14

+ 0.06

8 24 30

38 60

8 19 30

5 - 28

13 19 2

S.I. 1^h 45^m

H.A. + 5 15

Dec. + 40.3

P.A. 220.5 Ver J

Sprockets - 0.5 B

" + 0.5 B

Mean + 0.04

Dec. 5, 1905.

4th type star +34° 4500 (6.2) Phot. 3 H. Obs. Bowie Res.

21	36
26	4
4	28

+ 34, 9 9" 5 Graph
comp. ~~star~~ = +34° 4496 (8.5)

Index L & B

73.8 ← 4th type dis.

121.3

260.1

295.8

47.5

35.7

83.2

-2.10'

80.8

-2.10'

115.5

34.7

253.6

48.4

302.0

83.1

-2.10'

Index R & A

346.1

29.0

172.0

205.2

42.9

33.2

76.1

-2.31'

351.0

-2.25'

251.23

34.3

164.6

46.0

210.6

80.3

-2.19'

Mean -2.18'

9 3 58

9 12 52

15 110

9 7 85

5 -28

14 7 57

Dec. 5, 1905

S.J. 2 34
 H.A. + 4 55
 Dec. + 35.2
 P.A. 252.1 km B
 Sprocket + 0.5 B
 " + 1.5 B

4th Type Star + 2° 4709

23	39	+ 2.7
26	44	
<hr/> 3	<hr/> 5	

blonds Abandoned

Dec. 5, 1905.

4th Type Star + 38° 1539 Photo J.H. Ok Bowie Rec

$$\begin{array}{r}
 6 \\
 2 \\
 \hline
 3 \\
 8
 \end{array}
 \begin{array}{r}
 26. \\
 46 \\
 40 \\
 20
 \end{array}$$

+ 38.6

9.5 bap

Clouds
Index Above

82.0

← 4th type star dis.

113.3

31.3'

256.3

46.2'

302.5

77.5'

-2.27'

76.5

43.7'

-2.30'

120.2

262.5

32.0'

294.5

75.7'

-2.32'

Index Below

355.4

24.2'

23.6

166.9

40.5'

207.4

64.7'

-2.55'

348.3

39.7'

-2.57'

28.0

174.0

27.2'

201.8

67.5'

-2.59'

Mean -2.44'

10 29 2

10 36 28

65 30'

10 32 45'

5 -28'

15 32 17

Dec. 5, 1905.

S.J. 3 51
 S.A. - 2 40
 Dec. +38.0
 P.A. 192.0 Ver B
 Sprockets - 3.5 B
 " - 2.5 b

It's watch used for times tonight
 Watch 28 sec. fast

Reap. Jup. III Phot. H. H. Ols. B. ovie Rec.
 comp. with only sat. on nearer to Jup. of two
 Sats. (before eclipse) on same fol. side = Sat. I

B. & b. 1182
 13 20 18.8
 13 21 18.7

B 394
 13 20 0.0
 13 21 0.0

13	48	11	13	48	26	seen
	48	17		"	32	+2.5^ 35.0^ 185.0
	48	31		"	46	+2.5^ 35.8^ 220.0
	48	44		"	59	+2.3^ 38.3^ 184.2

Dec. 5, 1905

13	49	1	13	49	16	+2.3^	39.0^	222.5
	49	20		"	35	+2.2^	40.3^	183.5
	49	47		50	2	+1.9^	44.6^	223.8
	50	5		"	20	+1.9^	45.0^	179.2
	50	17		"	32	+1.7^	48.2^	224.2
	50	31		"	46	+1.6^	51.0^	176.0
	50	41		"	56	+1.6^	52.0^	227.0
	50	53		51	8	+1.5^	53.2^	175.0
	51	5		"	20	+1.4^	55.4^	228.2
	51	20		"	34	+1.4^	54.7^	172.8
	51	31		"	45	+1.4^	55.5^	227.5
	51	47		52	1	+1.3^	57.5^	172.0
	52	2		"	16			229.5
				"	27			169.0
				"	45		64.0^	233.0
13	52	53		53	1		64.1^	169.4
	-14			"	18	+1.0^	128.1^	233.5
13	52	39		"	35		64.0^	166.8
				"	49		68.2^	235.0
13	53	58		54	8		69.8^	166.0
	-14			"	22	+0.8^	138.0^	235.8
13	53	44		"	45		69.0^	164.1
				"	59		73.4^	237.5
13	55	6		55	14		75.4^	163.0
	-14			"	28	+0.6^	148.8^	238.4
13	54	52		55	45		74.4^	161.5

Dec. 5, 1905

13	56	5 [^]		55	58	77.5 [^]	239.0	
		-14 [^]	13	56	13	80.5 [^]	160.6	
13	55	51 [^]		"	25	158.0 [^]		
						+0.4 [^] 79.0 [^]	241.1	
				"	47			
13	57	9 [^]		57	2	82.6 [^]	159.8	
		-14 [^]		"	16	84.2 [^]	242.4	
13	56	55 [^]		"	32	166.8 [^]	159.4	
						+0.3 [^] 83.4 [^]	243.6	
				"	46			
13	58	8 [^]		58	4	85.5 [^]	158.5	
		-14 [^]		"	15	84.9 [^]	244.0	
13	57	54 [^]		"	27	170.4 [^]	159.0	
						+0.2 [^] 85.2 [^]	243.9	
				"	43			
13	59	8 [^]		59	5	88.2 [^]	156.8	
		-13 [^]		"	18	89.6 [^]	245.0	
13	58	55 [^]		"	28	177.8 [^]	156.2	1
						0.0 [^] 88.9 [^]	245.8	
				"	38			
14	0	6 [^]	13	59	47	90.2 [^]	155.1	
		-13 [^]		0	11	90.8 [^]	245.3	
13	59	53 [^]	14	"	46	181.0 [^]	155.0	2
						0.0 [^] 90.5 [^]	245.8	
				"	57			
14	1	18 [^]		1	11	92.0 [^]	155.8	
		-13 [^]		"	25	92.5 [^]	247.0	
14	1	5 [^]		"	37	184.5 [^]	154.6	3
						-0.1 [^] 92.2 [^]	247.1	
				"	54			
14	2	15 [^]		2	7	93.2 [^]	154.3	
		-13 [^]				93.7 [^]	247.5	
14	2	2 [^]				186.9 [^]		
						-0.1 [^] 93.4 [^]		

Dec. 5, 1905.

14	2	19	154.2	4
	"	41	247.9	
	"	54	93.9^ 154.6	
14	3	8	95.0^ 248.5	
	"	30	188.9^ 153.5	5
14	3	6	-0.2^ 94.4^ 248.5	
	"	44	153.5	
14	4	37	95.0^ 248.5	
	"	29	96.0^ 248.5	
14	4	24	191.0^ 153.2	6
	"	43	-0.2^ 95.5^ 249.2	
14	5	53	96.3^ 152.8	
	"	46	95.9^ 249.1	
14	5	40	192.2^ 153.1	7
	"	0	-0.2^ 96.1^ 249.0	
14	6	55	95.8^ 153.0	
	"	44	96.5^ 248.8	
14	6	43	192.3^ 152.5	8
	"	6	-0.2^ 96.2^ 249.0	
	"	20	249.0	
	"	31	153.0	
	"	44	95.8^ 153.0	
14	7	6	96.5^ 248.8	
	"	20	192.3^ 152.5	8
	"	8	-0.2^ 96.2^ 249.0	
	"	25	249.0	
	"	37	188.0	
14	8	50	28.0^ 216.0	
	"	8	29.0^ 216.0	
14	8	48	57.0^ 187.5	
	"	25	+3.0^ 28.5^ 216.0	

Limit of vis.

Seeing a little blurry but yet pretty good.
Sat. reap. in a somewhat dif. position

Dec. 5, 1905.

from that indicated in diagram so that there was a slight necessary delay in adjustment of images.

B & b 1182

14	23	10.1
14	24	10.0

B 394

14	23	0.0
14	24	0.0

∴ From 13^h 22^m 45^s to 13^h 29^m 57^s subtract 16 sec.

13	29	57.	"	13	37	2.	"	17 "
13	37	2.	"	13	44	20.	"	16 "
13	44	20.	"	13	51	31.	"	15 "
13	51	31.	"	13	58	43.	"	14 "
13	58	43.	"	14	5	55.	"	13. "
14	5	55.	"	14	13	6.	"	12. "
14	13	6.	"	14	20	12.	"	11. "
14	20	12.	"	1.				

Dec. 7, 1905. (Thursday)

V Vulpeculae Photo. J. H. Oke. Bowie Res. 9.5. Graph

20 31 + 26.0
24 35 Index Red
4 4

46.9 ← var. dia

147.1

238.4

316.8

100.2

78.4

178.6

- 0.03

A

58.4

137.8

227.9

329.8

79.4

101.9

181.3

178.7

- 0.00

+ 0.02

L & B

321.1

54.3

152.5

222.0

93.2

69.5

162.7

- 0.33

B

331.4

43.98

140.0

236.5

72.4

96.5

168.9

- 0.21

- 0.27

7 38 12

64 64

7 32 32

5 -40

12 31 52

2.5. 1^h 7^m

P.A. + 4 33

Dec. + 26.4

P.A. 189.0 Var. B.

Sprocket - 0.5 B

" + 0.5 b

Mean - 0.14

Dec. 7, 1905.

4th Type Stars +34° 4500 Phot. J. H. Oke. Bowie Rec.

21	36	+ 34.9
----	----	--------

color 3

9.5 days

25	26
+ 3	50

Index Left

255.4

304.2

79.1

114.9

← 4th type, due

48.8

35.8

84.6

-2.06

B

260.0

-2.07

296.4

36.4

73.0

47.6

120.6

84.0

-2.08

Index Right

167.2

210.3

351.5

25.5

43.1

34.0

77.1

-2.28

A

171.7

-2.25

204.8

33.1

344.8

46.1

30.9

79.2

-2.22

Mean -2.16

8 16 30

8 24 30

40 60

8 20 30

5 -40

13 19 50

Dec. 7, 1905.

S.J. 1 h 51^m
 H.A. + 4 12
 Dec. + 35.2
 P.A. 251.5 Var. B
 Sprocket + 0.5 B
 " + 1.5 B

Fourth Type Star + 24709 Phot. J.K. Ols. Bowie Rec

23	39	+ 2.7
26	39	
+ 3	0	

9.5 bap

For measurements see fol. page.

Dec. 7, 1905.

Index L & A

9 27 7

83.0 ← 4th. type dis.

112.0

261.8

296.1

29.0

34.3

63.3

-2.74

B

80.2

-2.76

115.5

35.3

265.0

27.0

292.0

62.3

-2.77

Index R & B

357.3

20.9

174.2

201.7

23.6

27.5

51.1

-3.23

A

354.3

-3.24

22.4

28.1

177.2

23.5

199.7

50.6

-3.24

Mean -3.00

9 34 42

9 61 49

5 30 54

14 30 14

S.J.

3^h1^m

H.A.

+3

18

Dec.

+3.0

P.A.

168.5

Per B

Sprocket

-9.5

+14.5

"

-8.5

+15.5

"

-8.0

+16.0

Dec. 7, 1905

Fourth Type Star +14° 1283 (65) Phot. J. K. Obs. Bowie Rec.

6	12
3	17
2	55
9	5

+14.8
Index R & A

9.5 bap

10 10 54

244.2 4th type dis.

312.6 68.4

62.0 72.0

134.0 140.4 -0.77

A

240.2

-0.74

318.9 78.7

65.2 64.9

130.1 143.6 -0.70

Index L & B

158.5

218.3

333.9

46.0

59.8

72.1

131.9 -0.94

B

154.0

-1.01

220.6

66.6

338.3

58.5

36.8

125.1 -1.08

Mean -0.88

10 18 22

28 76

10 14 38

5 -40

15 13 58

23. 3h 48m

P.A. -2 34

Dec. +14.3

P.A. 204.0 Ver B

Sprockets -5.5 B

" -4.5 b

The P.A. reads some 5° dif. from on Oct. 6. The sprockets however reads the same, the dif. in P.A. is due to the strain of the carriage on the track when the carriage is pretty well

Dec: 7, 1905.

run up the track In such a case the track is apt to slightly twist thereby altering the P.A. a little. Region however thoroughly identified

4th type star $+31^{\circ} 13' 88''$ (8.1) (Photo. J. K. Oke, Brown Rec.)

6	30
4	00
2	30
9	30

+31.9

9.5 bap

Measurements on fol. page.

Dec. 7, 1905.

Index RLB

10 54 30

$$\begin{array}{r}
 130.3 \\
 246.4 \\
 324.3 \\
 53.3 \\
 \hline
 754.0
 \end{array}$$

$$\begin{array}{r}
 116.1 \\
 89.0 \\
 \hline
 205.1 \\
 154.9
 \end{array}$$

$$+ 0.48$$

$$\begin{array}{r}
 140.5 \\
 233.7 \\
 312.5 \\
 66.3 \\
 \hline
 552.0
 \end{array}$$

$$\begin{array}{r}
 93.2 \\
 113.8 \\
 \hline
 207.0 \\
 153.0
 \end{array}$$

$$+ 0.52$$

Index LKA

$$\begin{array}{r}
 230.0 \\
 325.5 \\
 38.3 \\
 157.4 \\
 \hline
 751.2
 \end{array}$$

$$\begin{array}{r}
 95.5 \\
 119.1 \\
 \hline
 214.6 \\
 145.4
 \end{array}$$

$$+ 0.67$$

$$\begin{array}{r}
 219.6 \\
 334.8 \\
 48.0 \\
 147.9 \\
 \hline
 749.3
 \end{array}$$

$$\begin{array}{r}
 115.2 \\
 99.9 \\
 \hline
 215.1 \\
 144.9
 \end{array}$$

$$+ 0.68$$

11 7 33

21 61 63

10 60 62

5 -40

16 0 22

S.J. 4^h 30^m
 H.A. -2 7

Dec. +31.0

P.A. 110.4

Sprocket -2.5

" -1.5

Mean +0.59

W's watch used for times
 Watch 40 sec. fast

Dec. 8. 1905 (Friday)

V Sulpeculae Phot. J. H. Ob. Brown Rec.
9.5 Gap

20 31 + 26.0
24 37 Index L & A
+ 4 6

229.4 ← var. dis:

7 39 27

329.2

99.8

57.8

81.2

139.0

181.0

179.0 + 0.02

237.8

318.7

80.9

+ 0.02

48.0

99.5

147.5

180.4

179.6 + 0.01

Index R & B

140.8

237.4

96.6

331.4

72.5

43.9

169.1

- 0.20

150.5

- 0.24

223.6

73.1

328.2

91.8

55.0

164.9

- 0.29

7 51 8

7 90 35

7 45 18

5 - 45

12 44 33

S.J. 1^h 24^m

S.A. + 4 50

Dec. + 26.4

P.A. 189.5 var B

Sprocket - 0.5 B

" + 0.5 B

Mean - 0.11

Dec. 8, 1905.

4th type star +17° 979 (8.9) Phot J. H. Olk Bowie Rec
 color 2 9.5 gap
 Index R & A. lo. L. = +17° 978 (8.6)
 4th type dis.

5	24
1	50
3	34
8	26

331.7

45.4

162.0

216.8

73.7

54.8

128.5

-1.01

Ar

342.0

35.3

150.0

225.5

53.3

75.5

128.8

-1.00

Index LUB

237.5

319.0

67.4

127.7

81.5

60.3

141.8

-0.74

B

247.5

307.1

58.9

138.0

59.6

79.1

138.7

-0.80

-0.77

Mean - 0.88

8 42 14

8 49 48

8 91 62

8 45 61

5 - 45

13 45 16

Dec. 8, 1905

S.I. 2^h 20^m

H.A. - 3 15

Dec. +16.6

P.A. 218.5 Ver B

Sprockets - 1.5 B

" - 0.5 b

4th. type star + 24° 1686 (8.2) Phot Jk. Ok Bowie

7	36	+ 24.8	Full aperture used
<u>2</u>	<u>36</u>		
5	0		
7	0		

bolov 1
 Comp. star + 24° 1689 (9.1)

For measurements see fol. page

Dec. 8, 1905

Index R 4d

9 28 52

334.2	← 4th type dis.	
43.1		
162.6	68.9	
	48.4	
211.0	<u>117.3</u>	-1.25'

345.2		-1.24'
32.6	47.4	
151.2	70.8	
222.0	<u>118.2</u>	-1.23'

Index L 4B

237.7		
315.9	78.2	
67.5	60.5	
128.0	<u>138.7</u>	-0.80'

248.8		-0.82'
-------	--	--------

9 37 8	307.5	58.7	
65 60	59.1	77.4	
9 32 60	136.5	<u>136.1</u>	-0.85'
5 -45			
14 32 15			

L.I. 3 4
H.C. -4 23

Dec. +23.9

P.A. 166.7 Ser B

Sprockets -5.5 B

" -4.5 b

Mean -1.03'

It's watch used for times
Watch 45 sec. fast.

Dec. 8, 1905

For balance of tonight's obs.
see R 154

